



SEQUENCE LISTING

<110> Burgess et al.

<120> Novel Proteins and Nucleic Acids Encoding Same

<130> 21402-099

<140> 09/939,853

<141> 2001-08-27

<150> 60/228,191

<151> 2000-08-25

<150> 60/267,300

<151> 2001-02-08

<150> 60/269,961

<151> 2001-02-20

<150> 60/277,337

<151> 2001-03-20

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<170> PatentIn Ver. 2.1

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Arg Gly Pro Thr Glu Asn Arg Val Arg Arg Arg Gln Ser Arg Arg Gln
35 40 45

Ala Ser Val Arg His Asn Arg Asn Ser Ala Ser Asp Glu Glu Asn Asp
50 55 60

Gly Asp Ser Gly Cys Ala Leu Glu Glu Tyr Ala Trp Val Pro Pro Asn
65 70 75 80

Leu Thr Pro Asp Gln Val Arg Tyr Tyr Phe Thr Ser Leu Pro Glu Asp
85 90 95

Lys Val Pro Leu Val Asp Ser Ile Gly Asp Lys Tyr Arg Val Arg Gln
100 105 110

Leu Leu His Gln Leu Pro Pro His Asp Asp Lys Val Cys Tyr Cys Asn
115 120 125

Asp Leu Ser Asp Glu Glu Lys Arg Glu Leu Arg Leu Phe Ser Glu Gln
130 135 140

Arg Lys Lys Asp Tyr Leu Gly Cys Gly Lys Ile Arg Ile Leu Pro Leu
145 150 155 160

Asn Thr Pro Gly Thr Pro Cys Ser Glu Cys Gly Ile Leu Val Lys Gly
165 170 175

Gly Asp Ile Val Ala Val Ala Ser Arg Ala Glu Pro Gly Met Cys Trp
180 185 190

His Pro Ala Cys Phe Val Cys Ser Val Cys Arg Glu Leu Leu Val Asp
195 200 205

Leu Phe Tyr Phe Tyr Gln Asp Gly Arg Leu Tyr Cys Gly Arg His His
210 215 220

Ala Glu Thr Leu Lys Pro Arg Cys Ser Ala Cys Asp Glu Ile Ile Phe
225 230 235 240

Ser Asp Glu Cys Thr Glu Ala Glu Gly Arg His Trp His Met Asp His
245 250 255

Phe Cys Cys Phe Glu Cys Asp Gln Val Leu Gly Gly Gln Arg Tyr Ile
260 265 270

Met Arg Asp Gly Lys Pro Asn Cys Thr Gln Cys Phe Glu Ala Leu Tyr
275 280 285

Ala	Glu	Tyr	Cys	Asp	Met	Cys	Gly	Asp	Leu	Ile	Gly	Leu	Asp	Ala	Gly	290	295	300	
Gln	Met	Gln	Tyr	Glu	Gly	Gln	His	Trp	His	Ala	Thr	Asp	Asn	Cys	Phe	305	310	315	320
Cys	Cys	Asn	Arg	Cys	Arg	Lys	Ser	Leu	Leu	Gly	Arg	Pro	Phe	Leu	Pro	325	330	335	
Lys	His	Gly	Arg	Ile	Phe	Cys	Ser	Lys	Ala	Cys	Ser	Leu	Gly	Glu	Asp	340	345	350	
Pro	Gly	His	Ser	Glu	Ser	Asp	Ser	Gln	His	Ser	Ser	Ser	Gln	Tyr	Glu	355	360	365	
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Ser	Pro	Ala	Ser	Asn	Asn	Val	Phe	Ile	Asp	Ala	Ala	Asp	Met	Tyr	Pro	405	410	415	
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Met	Val	Thr	Glu	Asn	Asp	Ala	Gly	Phe	Lys	Gly	Ala	Ala	Thr	Ser	Arg	450	455	460	
Lys	Thr	Val	Thr	Asp	Ser	Val	Thr	Ser	Pro	Thr	Ser	Thr	Val	Ser	Ser	465	470	475	480
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Glu	His	Gln	Gln	Asn	Ala	Ala	Leu	Lys	Ala	Ala	Met	Gly	Ser	Asn	Tyr	515	520	525	
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Ile	Asp	Asn	Lys	Ser	Pro	Pro	Val	Asn	Val	Ala	Ser	Met	Leu	Pro	Lys	595	600	605	
Ser	Ala	Val	Pro	Ile	Pro	Ala	Pro	Arg	Ala	Arg	Tyr	Ala	Pro	Ser	Leu	610	615	620	
Thr	Pro	Ser	Pro	Pro	Ser	Thr	Ala	Ala	Ser	Glu	Leu	Thr	Ser	Pro	Trp	625	630	635	640
Met	His	Lys	Ser	His	Ala	Arg	Thr	Asp	Ser	Pro	Pro	Asp	Ser	Arg	Glu	645	650	655	
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Glu	His	Ser	Ser	Pro	Leu	Gln	Arg	Ser	Val	Ser	Glu	Arg	Leu	Ala	Asn	675	680	685	
Lys	Arg	Arg	Ser	Arg	Glu	Pro	Ile	Ser	Leu	Pro	Glu	Gln	Thr	Ile	Ser	690	695	700	
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Pro	Ser	Lys	Ser	Phe	Arg	Asn	Arg	Glu	Arg	Gly	Ser	Leu	Ser	Gly	Ser	740	745	750	
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Ala	Ser	Asp	Asp	Glu	Asp	Gly	Ala	Gly	Phe	Gly	Asp	Ala	Gln	Gly	Asp	770	775	780	
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Pro	Glu	Glu	Val	Thr	Glu	Lys	Pro	Arg	Ser	Gln	Asn	Gln	Gly	Gly	Arg	805	810	815	
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Arg	Thr	His	Ser	Ala	Leu	Asn	Leu	Asp	Glu	Leu	Asp	Cys	Ala	Ile	Ala	835	840	845	
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Phe	Glu	Arg	Ser	Ala	Ala	Thr	Pro	Thr	Ser	Ser	Arg	Lys	Asn	Arg	Arg	885	890	895	

Thr Lys Arg Phe Val Glu Asp Glu Glu Glu Asp Gly Trp Cys Ser Thr
900 905 910

Cys Thr Ser Ser Asn Asp Asp Ser Asp Tyr Glu Arg Trp Asp Gly Leu
915 920 925

Gly Thr Ser Pro Pro Thr Ser Pro Leu Ser Ala Met Arg Arg Gly Ser
930 935 940

Ala Pro Val Gly Val Arg Val Asn Met Thr Arg Arg Gln Pro Pro His
945 950 955 960

Pro Phe Leu Ala Asn Ala Asp Ser Ala Leu Ala Ala Ser Ala Ala Gly
965 970 975

Phe Asn Ser Asn Gly Val Tyr Arg Pro Ser Met Pro Arg Asn Phe Ser
980 985 990

Thr Thr Ser His Met Arg Tyr Arg Arg Arg Gln Gln Lys Lys His Cys
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Ile Val Met
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Arg Gly Pro Thr Glu Asn Arg Val Arg Arg Arg Gln Ser Arg Arg Gln
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Ala Ser Val Arg His Asn Arg Asn Ser Ala Ser Asp Glu Glu Asn Asp
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Gly Asp Ser Gly Cys Ala Leu Glu Glu Tyr Ala Trp Val Pro Pro Asn
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Leu Thr Pro Asp Gln Val Arg Tyr Tyr Phe Thr Ser Leu Pro Glu Asp
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Lys Val Pro Leu Val Asp Ser Ile Gly Asp Lys Tyr Arg Val Arg Gln
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Leu Leu His Gln Leu Pro Pro His Asp Asp Lys Val Cys Tyr Cys Asn
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Asp Leu Ser Asp Glu Glu Lys Arg Glu Leu Arg Leu Phe Ser Glu Gln

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Asn Thr Pro Gly Thr Pro Cys Ser Glu Cys Gly Ile Leu Val Lys Gly 165 170 175		
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His Pro Ala Cys Phe Val Cys Ser Val Cys Arg Glu Leu Leu Val Asp 195 200 205		
Leu Phe Tyr Phe Tyr Gln Asp Gly Arg Leu Tyr Cys Gly Arg His His 210 215 220		
Ala Glu Thr Leu Lys Pro Arg Cys Ser Ala Cys Asp Glu Ile Ile Phe 225 230 235 240		
Ser Asp Glu Cys Thr Glu Ala Glu Gly Arg His Trp His Met Asp His 245 250 255		
Phe Cys Cys Phe Glu Cys Asp Gln Val Leu Gly Gly Gln Arg Tyr Ile 260 265 270		
Met Arg Asp Gly Lys Pro Asn Cys Thr Gln Cys Phe Glu Ala Leu Tyr 275 280 285		
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Cys Cys Asn Arg Cys Arg Lys Ser Leu Leu Gly Arg Pro Phe Leu Pro 325 330 335		
Lys His Gly Arg Ile Arg Cys Ser Lys Ala Cys Ser Leu Gly Glu Asp 340 345 350		
Pro Gly His Ser Glu Ser Asp Ser Gln His Ser Ser Ser Gln Tyr Glu 355 360 365		
Asn Pro Gln Leu Pro Thr Ser His Asn Val Arg Arg Ser Leu Asn Leu 370 375 380		
Asp Asn Leu Ser Ile His Asp Lys Pro Trp Glu Asp Lys Gly Glu Leu 385 390 395 400		
Ser Pro Ala Ser Asn Asn Val Phe Ile Asp Ala Ala Asp Met Tyr Pro 405 410 415		
Thr Ser Ala Ala Val Ala Ala Ser Thr Arg Tyr Ser Lys Gly His Thr 420 425 430		
Arg Pro Ser His Pro Tyr Leu Asp Gly Met Asp Pro Val Asn Ala Glu		

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Ala	Pro	Glu	Ile	Lys	Lys	Thr	Ile	Asp	Ser	Leu	Thr	Lys	Ala	Thr	Glu
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Phe	Pro	Ser	Pro	Pro	Val	Pro	Val	Pro	Ser	Pro	Pro	Thr	Glu	Ser	Lys
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Glu	His	Ser	Ser	Pro	Leu	Gln	Arg	Ser	Val	Ser	Glu	Arg	Leu	Ala	Asn
	675						680					685			
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	690					695					700				
Glu	His	Pro	Arg	Leu	Arg	Ser	Asp	Asp	Lys	His	Val	Ser	Val	Glu	Asn
705					710					715					720
Asp	Lys	Thr	Ser	Pro	Glu	Leu	Lys	Ser	Ile	Leu	Lys	Lys	Ser	Arg	Asn
				725					730					735	
Pro	Ser	Lys	Ser	Phe	Arg	Asn	Arg	Glu	Arg	Gly	Ser	Leu	Ser	Gly	Ser

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Leu	Asp	Arg	Leu	Glu	Glu	Phe	His	Arg	Lys	Ser	Asp	Val	Met	Lys	Tyr				
	755						760					765							
Ala	Ser	Asp	Asp	Glu	Asp	Gly	Ala	Gly	Phe	Gly	Asp	Ala	Gln	Gly	Asp				
	770					775					780								
Phe	Ser	Ser	Phe	Gln	Arg	Gly	Gln	Arg	Leu	Tyr	Ser	Ser	Ala	Arg	Phe				
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Pro	Glu	Glu	Val	Thr	Glu	Lys	Pro	Arg	Ser	Gln	Asn	Gln	Gly	Gly	Arg				
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Pro	Arg	Ser	Gln	His	Arg	Thr	Arg	Phe	Lys	Asp	Asn	Ser	Ala	Leu	Arg				
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Pro	Asn	Ala	Gln	Arg	Ser	Gln	Phe	Arg	Glu	Gln	Lys	Leu	Glu	Leu	Asp				
		835					840						845						
Cys	Ala	Ile	Ala	Arg	Arg	Asn	Pro	Lys	Pro	Gly	Lys	Thr	Cys	Ser	Lys				
	850					855					860								
Leu	Ser	Gly	Lys	Ser	Thr	Cys	Ser	Lys	Lys	Leu	Lys	Arg	Thr	Arg	Ser				
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Thr	Asp	Phe	Ala	Phe	Glu	Arg	Ser	Ala	Ala	Thr	Pro	Thr	Ser	Ser	Arg				
				885					890						895				
Lys	Asn	Arg	Arg	Thr	Lys	Arg	Phe	Val	Glu	Asp	Glu	Glu	Glu	Asp	Gly				
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Trp	Cys	Ser	Thr	Cys	Thr	Ser	Ser	Ser	Asp	Asp	Ser	Asp	Tyr	Glu	Arg				
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Trp	Asp	Gly	Leu	Gly	Thr	Ser	Pro	Pro	Thr	Ser	Pro	Leu	Ser	Ala	Met				
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Arg	Arg	Gly	Ser	Ala	Pro	Val	Gly	Val	Arg	Val	Asn	Met	Thr	Arg	Arg				
945					950					955					960				
Gln	Pro	Pro	His	Pro	Phe	Leu	Ala	Asn	Ala	Asp	Ser	Ala	Leu	Ala	Ala				
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Ser	Ala	Ala	Gly	Phe	Asn	Ser	Asn	Gly	Val	Tyr	Arg	Pro	Ser	Met	Pro				
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Arg	Asn	Phe	Phe	Phe	His	His	Val	Ala	Tyr	Ala	Leu	Gln	Ala	Glu	Thr				
		995					1000					1005							
Ala	Glu	Lys	Ala	Leu	Tyr	Arg	His	Val	Thr	Thr	Asn	Ala	Val	Thr	Lys				
	1010					1015					1020								
Thr	Ser	Glu	Ile	Asp	Arg	Lys	Ser	Ser	Glu	Thr	Lys	Ser	Trp	Arg	Ser				
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Gln	Asp	Ala	Ser	Tyr	Leu	Pro	Arg	Gly	Gly	Ser	Lys	Ala	Arg	Glu	Ser				

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Gly Thr Gly Leu Thr Phe Ala Ser His Ser Gln Arg Pro Glu Ser Ala		
35	40	45
Ile Ser Gln Val Ala Ser Thr Ala His Leu Asp Val Pro Ser Ala Ala		
50	55	60
Ser Ser Gly Ser Gly Gly Ser Ala Val Ser Gly Gly Ser Gly Gly Ala		
65	70	75
Pro Glu Ser Ala Gly Arg Phe Val Ser Pro Leu Gln Arg Arg His Cys		
85	90	95
Gln Pro Pro Ser His Leu Pro Leu Asn Ser Val Ala Ser Pro Leu Arg		
100	105	110
Thr Ala Ser Tyr Lys Ser Ala Ala Ala Val Ala Gly His Gly Phe His		
115	120	125
His Ser His His Gln Gln Leu Asp Phe Gln Arg Asn Ser Gln Ser Asp		
130	135	140
Asp Asp Ser Gly Cys Ala Leu Glu Glu Tyr Thr Trp Val Pro Pro Gly		
145	150	155
Leu Arg Pro Asp Gln Val Arg Leu Tyr Phe Ser Gln Leu Pro Asp Asp		
165	170	175
Lys Val Pro Tyr Val Asn Ser Pro Gly Glu Lys Tyr Arg Val Lys Gln		
180	185	190
Leu Leu His Gln Leu Pro Pro Gln Asp Asn Glu Val Arg Tyr Cys His		
195	200	205
Ser Leu Ser Asp Glu Glu Arg Lys Glu Leu Arg Ile Phe Ser Ala Gln		
210	215	220
Arg Lys Arg Glu Ala Leu Gly Arg Gly Ala Val Arg Leu Leu Ser Asp		
225	230	235
		240

Glu	Arg	Pro	Cys	Lys	Gly	Cys	Glu	Glu	Pro	Leu	Ser	Gly	Gly	Asp	Ile	
				245					250					255		
Val	Val	Phe	Ala	Gln	Arg	Leu	Gly	Ala	Gln	Leu	Cys	Trp	His	Pro	Gly	
			260					265					270			
Cys	Phe	Val	Cys	Ser	Val	Cys	Lys	Glu	Leu	Leu	Val	Asp	Leu	Ile	Tyr	
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Phe	Gln	Arg	Asp	Gly	Asn	Leu	Tyr	Cys	Gly	Arg	His	His	Ala	Glu	Thr	
	290					295					300					
Gln	Lys	Pro	Arg	Cys	Ser	Ala	Cys	Asp	Glu	Ile	Ile	Phe	Ser	Asp	Glu	
305					310					315					320	
Cys	Thr	Glu	Ala	Glu	Gly	Arg	Thr	Trp	His	Met	Lys	His	Phe	Ala	Cys	
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Gln	Glu	Cys	Glu	His	Gln	Leu	Gly	Gly	Gln	Arg	Tyr	Ile	Met	Arg	Glu	
			340					345					350			
Gly	Lys	Pro	Tyr	Cys	Leu	Ala	Cys	Phe	Asp	Thr	Met	Phe	Ala	Glu	Tyr	
		355					360					365				
Cys	Asp	Tyr	Cys	Gly	Glu	Val	Ile	Gly	Val	Asp	Gln	Gly	Gln	Met	Ser	
	370					375					380					
His	Asp	Gly	Gln	His	Trp	His	Ala	Thr	Asp	Gln	Cys	Phe	Ser	Cys	Cys	
385					390					395					400	
Thr	Cys	Arg	Cys	Ser	Leu	Leu	Gly	Arg	Pro	Phe	Leu	Pro	Arg	Arg	Gly	
				405					410					415		
Thr	Ile	Tyr	Cys	Ser	Ile	Ala	Cys	Ser	Lys	Gly	Glu	Pro	Pro	Thr	Pro	
			420					425					430			
Ser	Asp	Thr	Ser	Ser	Gly	Pro	Gln	Leu	Arg	Pro	Thr	His	Arg	Ala	Ser	
		435					440					445				
Thr	Ser	Ser	Gln	Ile	Ala	Lys	Ser	Pro	Arg	Arg	Gly	Gly	Glu	Arg	Glu	
	450					455					460					
Arg	Asp	Pro	Gly	Arg	Lys	Ala	His	His	Gly	His	Pro	Lys	Ala	Thr	Gly	
465					470				475					480		
Ser	Ala	Gly	Asp	Leu	Leu	Glu	Arg	Gln	Glu	Arg	Gln	Arg	Met	Glu	Ala	
				485				490					495			
Ala	Gly	Val	Ala	Asp	Leu	Leu	Leu	Gly	Gly	Gly	Val	Pro	Gly	Met	Pro	
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Arg	Pro	Ala	His	Pro	Pro	Pro	Ile	Asp	Leu	Thr	Glu	Leu	Gly	Ile	Ser	
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Leu	Asp	Asn	Ile	Cys	Ala	Gly	Asp	Lys	Ser	Ile	Phe	Gly	Asp	Thr	Gln	
	530					535					540					

Thr Leu Thr Asn Ser Met Pro Asp Met Leu Leu Ser Lys Ala Asp Asp
 545 550 555 560

Ser His Ser Tyr Gln Ser Ile Asp Lys Ile Asn Leu Asn Ser Pro Ser
 565 570 575

Asn Ser Asp Leu Thr Gln Ser Thr Gln Glu Leu Ala Asn Glu Leu Glu
 580 585 590

Leu Asp Asn Glu Pro Val Arg Glu Leu Pro His Asp Gly Tyr Glu Gln
 595 600 605

Leu Phe Ala Asn Asn Arg Asn Gln Glu His Pro Ala Glu Gln Tyr Asp
 610 615 620

Asp Glu Gln Leu Asp Asn Arg Pro Met Lys Glu Val Arg Phe His Ser
 625 630 635 640

Val Gln Asp Thr Met Ser Arg Ser Lys Ser Tyr Thr Asp Asn Ser Asn
 645 650 655

Ala Arg Arg Arg Arg Arg Arg Arg Asn Gln Ser Arg Ser Ser Ser Glu
 660 665 670

Met Gln Ile Asn Gln Thr Asn Leu Arg Leu His Asn Ala Gln Thr Gln
 675 680 685

Val Gly Thr Thr Pro Leu Asn Leu Leu Asn Asn Leu Asp Asn Cys Asp
 690 695 700

Val Ala Ser Ile Cys Ser Thr Cys Ser Ser Ser Ser Ser Ser Asp Met
 705 710 715 720

Asp Asp Tyr Val Tyr Arg Leu Pro Ala Arg Lys His Tyr Gly Gly Val
 725 730 735

Arg Val Ala Tyr Val Pro Asn Asp Ala Leu Ala Tyr Glu Arg Lys Lys
 740 745 750

Lys Met Ala Gln Asp Ser Ser Leu Ala Pro Gly Ala Gly Asn Ala Ser
 755 760 765

Val Gly Gly Ala Pro Ala Ile Met His Glu Ser Lys Asn Cys Thr Ile
 770 775 780

Ser
 785

<210> 16
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<400> 16
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Glu Ala Glu Asp Pro Asp Arg Gly Gln Pro Cys Asn Ser Cys Arg Glu
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Gln Cys Pro Gly Phe Leu Leu His Gly Trp Arg Lys Ile Cys Gln His
 35 40 45

Cys Lys Cys Pro Arg Glu Glu His Ala Val His Ala Val Pro Val Asp
 50 55 60

Leu Glu Arg Ile Met Cys Arg Leu Ile Ser Asp Phe Gln Arg His Ser
 65 70 75 80

Ile Ser Asp Asp Asp Ser Gly Cys Ala Ser Glu Glu Tyr Ala Trp Val
 85 90 95

Pro Pro Gly Leu Lys Pro Glu Gln Val Tyr Gln Phe Phe Ser Cys Leu
 100 105 110

Pro Glu Asp Lys Val Pro Tyr Val Asn Ser Pro Gly Glu Lys Tyr Arg
 115 120 125

Ile Lys Gln Leu Leu His Gln Leu Pro Pro His Asp Ser Glu Ala Gln
 130 135 140

Tyr Cys Thr Ala Leu Glu Glu Glu Glu Lys Lys Glu Leu Arg Ala Phe
 145 150 155 160

Ser Gln Gln Arg Lys Arg Glu Asn Leu Gly Arg Gly Ile Val Arg Ile
 165 170 175

Phe Pro Val Thr Ile Thr Gly Ala Ile Cys Glu Glu Cys Gly Lys Gln
 180 185 190

Ile Gly Gly Gly Asp Ile Ala Val Phe Ala Ser Arg Ala Gly Leu Gly
 195 200 205

Ala Cys Trp His Pro Gln Cys Phe Val Cys Thr Thr Cys Gln Glu Leu
 210 215 220

Leu Val Asp Leu Ile Tyr Phe Tyr His Val Gly Lys Val Tyr Cys Gly
 225 230 235 240

Arg His His Ala Glu Cys Leu Arg Pro Arg Cys Gln Ala Cys Asp Glu
 245 250 255

Ile Ile Phe Ser Pro Glu Cys Thr Glu Ala Glu Gly Arg His Trp His
 260 265 270

Met Asp His Phe Cys Cys Phe Glu Cys Glu Ala Ser Leu Gly Gly Gln
 275 280 285

Arg Tyr Val Met Arg Gln Ser Arg Pro His Cys Cys Ala Cys Tyr Glu
 290 295 300

Ala Arg His Ala Glu Tyr Cys Asp Gly Cys Gly Glu His Ile Gly Leu
 305 310 315 320

Asp Gln Gly Gln Met Ala Tyr Glu Gly Gln His Trp His Ala Ser Asp
 325 330 335
 Arg Cys Phe Cys Cys Ser Arg Cys Gly Arg Ala Leu Leu Gly Arg Pro
 340 345 350
 Phe Leu Pro Arg Arg Gly Leu Ile Phe Cys Ser Arg Ala Cys Ser Leu
 355 360 365
 Gly Ser Glu Pro Thr Ala Pro Gly Pro Ser Arg Arg Ser Trp Ser Ala
 370 375 380
 Gly Pro Val Thr Ala Pro Leu Ala Ala Ser Thr Ala Ser Phe Ser Ala
 385 390 395 400
 Val Lys Gly Ala Ser Glu Thr Thr Thr Lys Gly Thr Ser Thr Glu Leu
 405 410 415
 Ala Pro Ala Thr Gly Pro Glu Glu Pro Ser Arg Phe Leu Arg Gly Ala
 420 425 430
 Pro His Arg His Ser Met Pro Glu Leu Gly Leu Arg Ser Val Pro Glu
 435 440 445
 Pro Pro Pro Glu Ser Pro Gly Gln Pro Asn Leu Arg Pro Asp Asp Ser
 450 455 460
 Ala Phe Gly Arg Gln Ser Thr Pro Arg Val Ser Phe Arg Asp Pro Leu
 465 470 475 480
 Val Ser Glu Gly Gly Pro Arg Arg Thr Leu Ser Ala Pro Pro Ala Gln
 485 490 495
 Arg Arg Arg Pro Arg Ser Pro Pro Pro Arg Ala Pro Ser Arg Arg Arg
 500 505 510
 His His His His Asn His His His His His Asn Arg His Pro Ser Arg
 515 520 525
 Arg Arg His Tyr Gln Cys Asp Ala Gly Ser Gly Ser Asp Ser Glu Ser
 530 535 540
 Cys Ser Ser Ser Pro Ser Ser Ser Ser Ser Glu Ser Ser Glu Asp Asp
 545 550 555 560
 Gly Phe Phe Leu Gly Glu Arg Ile Pro Leu Pro Pro His Leu Cys Arg
 565 570 575
 Pro Met Pro Ala Gln Asp Thr Ala Met Glu Thr Phe Asn Ser Pro Ser
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 Leu Ser Leu Pro Arg Asp Ser Arg Ala Gly Met Pro Arg Gln Ala Arg
 595 600 605
 Asp Lys Asn Cys Ile Val Ala
 610 615

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 <213> Drosophila melanogaster

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 35 40 45
 Pro Leu Gln Pro Leu Thr Ala Gly Asp Leu Gln Phe Leu Asn Leu Ser
 50 55 60
 Leu Arg Gln Arg Ser Leu Pro Arg Ser Met Lys Pro Phe Lys Asp Ala
 65 70 75 80
 His Asp Ile Ser Phe Thr Phe Asn Glu Leu Asp Thr Ser Ala Glu Pro
 85 90 95
 Glu Val Ala Thr Gly Ala Ala Gln Gln Glu Ser Asn Glu Cys Arg Thr
 100 105 110
 Pro Leu Thr Gln Ile Ser Tyr Leu Gln Lys Ile Pro Thr Leu Pro Arg
 115 120 125
 His Phe Ser Pro Ser Gly Gln Gly Leu Ala Thr Pro Pro Ala Leu Gly
 130 135 140
 Ser Gly Gly Met Gly Leu Pro Ser Ser Ser Ser Ala Ser Ala Leu Tyr
 145 150 155 160
 Ala Ala Gln Ala Ala Ala Gly Ile Leu Pro Thr Ser Pro Leu Pro Leu
 165 170 175
 Gln Arg His Gln Gln Tyr Leu Pro Pro His His Gln Gln His Pro Gly
 180 185 190
 Ala Gly Met Gly Pro Gly Pro Gly Ser Gly Ala Ala Ala Gly Pro Pro
 195 200 205
 Leu Gly Pro Gln Tyr Ser Pro Gly Cys Ser Ala Asn Pro Lys Tyr Ser
 210 215 220
 Asn Ala Gln Leu Pro Pro Pro Pro His His His His Gln Leu Ser Pro
 225 230 235 240
 Ala Leu Ser Thr Pro Ser Pro Pro Ser Leu Leu His His Pro Ala Gly
 245 250 255
 Gly Thr Ser Ser Ala Ser Ala His Ala Pro Phe Leu Gly Gly Pro His

260										265					270						
Met	Asp	Met	Gln	Arg	Gln	Ser	His	Ser	Asp	Asp	Asp	Ser	Gly	Cys	Ala						
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Leu	Glu	Glu	Tyr	Thr	Trp	Val	Pro	Pro	Gly	Leu	Arg	Pro	Asp	Gln	Val						
	290					295					300										
Arg	Leu	Tyr	Phe	Ser	Gln	Ile	Pro	Asp	Asp	Lys	Val	Pro	Tyr	Val	Asn						
305					310					315					320						
Ser	Pro	Gly	Glu	Gln	Tyr	Arg	Val	Arg	Gln	Leu	Leu	His	Gln	Leu	Pro						
				325					330					335							
Pro	His	Asp	Asn	Glu	Val	Arg	Tyr	Cys	His	Ser	Leu	Thr	Asp	Glu	Glu						
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Arg	Lys	Glu	Leu	Arg	Leu	Phe	Ser	Thr	Gln	Arg	Lys	Arg	Asp	Ala	Leu						
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Gly	Arg	Gly	Asn	Val	Arg	Gln	Leu	Met	Ser	Ala	Arg	Pro	Cys	Asp	Gly						
	370					375					380										
Cys	Asp	Asp	Leu	Ile	Ser	Thr	Gly	Asp	Ile	Ala	Val	Phe	Ala	Thr	Arg						
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Leu	Gly	Pro	Asn	Ala	Ser	Trp	His	Pro	Ala	Cys	Phe	Ala	Cys	Ser	Val						
			405						410					415							
Cys	Arg	Glu	Leu	Leu	Val	Asp	Leu	Ile	Tyr	Phe	His	Arg	Asp	Gly	Arg						
		420						425					430								
Met	Tyr	Cys	Gly	Arg	His	His	Ala	Glu	Thr	Leu	Lys	Pro	Arg	Cys	Ser						
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Ala	Cys	Asp	Glu	Ile	Ile	Leu	Ala	Asp	Glu	Cys	Thr	Glu	Ala	Glu	Gly						
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Arg	Ala	Trp	His	Met	Asn	His	Phe	Ala	Cys	His	Glu	Cys	Asp	Lys	Gln						
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Leu	Gly	Gly	Gln	Arg	Tyr	Ile	Met	Arg	Glu	Gly	Lys	Pro	Tyr	Cys	Leu						
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His	Cys	Phe	Asp	Ala	Met	Phe	Ala	Glu	Tyr	Cys	Asp	Tyr	Cys	Gly	Glu						
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Ala	Ile	Gly	Val	Asp	Gln	Gly	Gln	Met	Ser	His	Asp	Gly	Gln	His	Trp						
	515						520					525									
His	Ala	Thr	Asp	Glu	Cys	Phe	Ser	Cys	Asn	Thr	Cys	Arg	Cys	Ser	Leu						
	530					535					540										
Leu	Gly	Arg	Ala	Phe	Leu	Pro	Arg	Arg	Gly	Ala	Ile	Tyr	Cys	Ser	Ile						
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Ala	Cys	Ser	Lys	Gly	Glu	Pro	Pro	Thr	Pro	Ser	Asp	Ser	Ser	Gly	Thr						

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Pro	Gln	Ala	Pro	Leu	Pro	Ala	Arg	Ile	Pro	Ser	Ser	His	Ala	Ser	Ser				
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	610					615					620								
Asn	Gln	Ala	Met	Tyr	Gln	Met	Gln	Ser	Gln	Gln	Met	Glu	Ala	Ala	Gly				
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Leu	Thr	Asp	Phe	Ser	Gly	Gly	Arg	Ala	Ser	Ser	Thr	Ser	Gln	Asn	Leu				
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Ser	Pro	Leu	Asn	Ser	Pro	Gly	Asp	Phe	Gln	Pro	His	Phe	Leu	Pro	Lys				
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Pro	Met	Glu	Leu	Gln	Arg	Gln	Leu	Leu	Glu	Asn	Pro	His	Thr	Ala	Ser				
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Met	Pro	Glu	Leu	Ala	Gly	Lys	Leu	Val	Ala	Pro	Pro	Ala	His	Met	Gln				
				725					730					735					
His	Leu	Ser	Gln	Leu	His	Ala	Val	Ser	Ser	His	Gln	Phe	Gln	Gln	His				
			740					745					750						
Glu	Tyr	Ala	Asp	Ile	Leu	His	Pro	Pro	Pro	Pro	Pro	Pro	Gly	Glu	Ile				
		755					760						765						
Pro	Glu	Leu	Pro	Thr	Pro	Asn	Leu	Ser	Val	Ala	Ser	Thr	Ala	Leu	Pro				
		770				775					780								
Pro	Glu	Leu	Met	Gly	Ser	Pro	Thr	His	Ser	Ala	Gly	Asp	Arg	Ser	Leu				
785					790						795				800				
Asn	Thr	Pro	Met	Ser	Thr	Gln	Ser	Ala	Ser	His	Ala	Pro	Pro	His	Pro				
				805					810					815					
Val	Ser	Ile	Leu	Ser	Gly	Ala	Ser	Ser	Ser	Ser	Pro	Met	Ser	Gly	Glu				
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Pro	Ala	Lys	Lys	Lys	Gly	Val	Arg	Phe	Glu	Gly	Ile	Pro	Asp	Thr	Leu				
		835					840					845							
Pro	Arg	Ser	Arg	Ser	Tyr	Ser	Gly	Asn	Gly	Ala	Gly	Thr	Ser	Gly	Gly				
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Gly	Glu	Arg	Glu	Arg	Asp	Arg	Asp	Lys	Asp	Lys	Glu	Gly	Gly	Gly	Arg				

865 870 875 880
 His Gly His Gly His Ser Ser Arg Arg Arg Arg Arg Arg Lys Ser Ser
 885 890 895
 Ser Ser Ser Ser His His Arg Ser Gly Ser Gly His Arg Ser His Ser
 900 905 910
 Thr Thr Arg Ala Asp Thr Tyr Ala Pro Ala Gln Pro Leu Ser Ser Ser
 915 920 925
 Tyr Gln Gly Pro Pro Ser Val Leu Gln Ala Ala Asn Leu Val His Glu
 930 935 940
 Ser Pro Ser Arg Gln Gln Arg Glu Arg Glu Arg Glu Arg Glu Arg Glu
 945 950 955 960
 Glu Ser Glu Glu Ser Asp Val Cys Ser Thr Cys Ser Ser Ser Ser Ser
 965 970 975
 Ser Ser Glu Asp Tyr Met Met Met Tyr Gln Leu Pro Gln Arg Arg His
 980 985 990
 Tyr Gly Gly Val Arg Val Ser Tyr Val Pro Asn Asp Ala Leu Ala Tyr
 995 1000 1005
 Asp Arg Lys Arg Lys Pro Ser Glu Leu Gly Gly Asp Lys Asp Lys Asn
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 Cys Ile Ile Ser
 1025

<210> 18
 <211> 1278
 <212> DNA
 <213> Homo sapiens

<400> 18
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 tctgttcccc gcccggttgt cctcgccctg ctgcgctgag tgtcccctgt tagcctcgac 180
 cccatggcgc tgcagacgct gcagagctcg tgggtgacct tccgcaagat cctgtctcac 240
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 ccagttcag accagaagaa tgctatgctg gactttgtgt tcacagtaga tgaccctgtc 360
 gcatggcatt caaagaacct gaagaaaaat tggagtcact actctttcct aaaagtttta 420
 gggcccaaga ttatcacgtc catccagaat aactatggcg ctggagttaa ctacaattca 480
 ttgatcatgt gtaatggtag gcttatcaaa tatggagtta ttagcactaa cgttctgatt 540
 gaagatctcc tcaactggaa taacttatac attgctggac gactccaaaa accggtgaaa 600
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 aaagtgttga atattgtgaa gcccaatata gccactttc gagagctcta tggcagcata 840
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 agccagaag gacagttcac tcagctgatg acattgccca aaaccttaca gcaacagata 960
 aatcatatta tggacctcc tggaaaaaac agagatgtgg aagaaacttt attccaagtg 1020
 gctcatgatc ccgactgtgg agatgtggtg cgactagggc tttcagcaat cgtgagaccg 1080

tctagtataa gacagagcac gaaaggcatt tttactgctg gcctgaagaa gtcagtgatt 1140
 tatagttcac taaaactgca caaaatgtgg aaagggtggc tgaggaaaac atcctgattt 1200
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 <212> PRT
 <213> Homo sapiens

<400> 19
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 Gly Val Tyr Arg Gln Ala Gly Pro Ser Ser Asp Gln Lys Asn Ala Met
 35 40 45
 Leu Asp Phe Val Phe Thr Val Asp Asp Pro Val Ala Trp His Ser Lys
 50 55 60
 Asn Leu Lys Lys Asn Trp Ser His Tyr Ser Phe Leu Lys Val Leu Gly
 65 70 75 80
 Pro Lys Ile Ile Thr Ser Ile Gln Asn Asn Tyr Gly Ala Gly Val Tyr
 85 90 95
 Tyr Asn Ser Leu Ile Met Cys Asn Gly Arg Leu Ile Lys Tyr Gly Val
 100 105 110
 Ile Ser Thr Asn Val Leu Ile Glu Asp Leu Leu Asn Trp Asn Asn Leu
 115 120 125
 Tyr Ile Ala Gly Arg Leu Gln Lys Pro Val Lys Ile Ile Ser Val Asn
 130 135 140
 Glu Asp Val Thr Leu Arg Ser Ala Leu Asp Arg Asn Leu Lys Ser Ala
 145 150 155 160
 Val Thr Ala Ala Phe Leu Met Leu Pro Glu Ser Phe Ser Glu Glu Asp
 165 170 175
 Leu Phe Ile Glu Ile Ala Gly Leu Ser Tyr Ser Gly Asp Phe Arg Met
 180 185 190
 Val Val Gly Glu Asp Lys Thr Lys Val Leu Asn Ile Val Lys Pro Asn
 195 200 205
 Ile Ala His Phe Arg Glu Leu Tyr Gly Ser Ile Leu Gln Glu Asn Pro
 210 215 220
 Gln Val Val Tyr Lys Ser Gln Gln Gly Trp Leu Glu Ile Asp Lys Ser
 225 230 235 240

Pro Glu Gly Gln Phe Thr Gln Leu Met Thr Leu Pro Lys Thr Leu Gln
245 250 255

Gln Gln Ile Asn His Ile Met Asp Pro Pro Gly Lys Asn Arg Asp Val
260 265 270

Glu Glu Thr Leu Phe Gln Val Ala His Asp Pro Asp Cys Gly Asp Val
275 280 285

Val Arg Leu Gly Leu Ser Ala Ile Val Arg Pro Ser Ser Ile Arg Gln
290 295 300

Ser Thr Lys Gly Ile Phe Thr Ala Gly Leu Lys Lys Ser Val Ile Tyr
305 310 315 320

Ser Ser Leu Lys Leu His Lys Met Trp Lys Gly Trp Leu Arg Lys Thr
325 330 335

Ser

<210> 20
<211> 1278
<212> DNA
<213> Homo sapiens

<400> 20
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cagtttttagt gaactataaa tctactgactt cttcaggcca gcagtaaaaa tgcctttcgt 180
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gcgttggggc acgaagag 1278

<210> 21
<211> 367
<212> PRT
<213> Mus musculus

<400> 21

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Gly	Arg	His	Ser	Thr	Val	Cys	Pro	Thr	Gly	Gly	Pro	Pro	Ala	His	Gly	20	25	30	
Ala	Ala	Gly	Leu	His	Ser	Ser	Gly	Val	Gly	Leu	Arg	Arg	Ile	Leu	Ala	35	40	45	
His	Phe	Pro	Glu	Asp	Leu	Ser	Leu	Ala	Phe	Ala	Tyr	Gly	Ser	Ala	Val	50	55	60	
Tyr	Arg	Gln	Ala	Gly	Pro	Ser	Ala	His	Gln	Glu	Asn	Pro	Met	Leu	Asp	65	70	75	80
Leu	Val	Phe	Thr	Val	Asp	Asp	Pro	Val	Ala	Trp	His	Ala	Met	Asn	Leu	85	90	95	
Lys	Lys	Asn	Trp	Ser	His	Tyr	Ser	Phe	Leu	Lys	Leu	Leu	Gly	Pro	Arg	100	105	110	
Ile	Ile	Ser	Ser	Ile	Gln	Asn	Asn	Tyr	Gly	Ala	Gly	Val	Tyr	Phe	Asn	115	120	125	
Pro	Leu	Ile	Arg	Cys	Asp	Gly	Lys	Leu	Ile	Lys	Tyr	Gly	Val	Ile	Ser	130	135	140	
Thr	Gly	Thr	Leu	Ile	Glu	Asp	Leu	Leu	Asn	Trp	Asn	Asn	Leu	Tyr	Ile	145	150	155	160
Ala	Gly	Arg	Leu	Gln	Lys	Pro	Val	Lys	Ile	Val	Ser	Met	Asn	Glu	Asn	165	170	175	
Met	Ala	Leu	Arg	Ala	Ala	Leu	Asp	Lys	Asn	Leu	Arg	Ser	Ala	Val	Thr	180	185	190	
Thr	Ala	Cys	Leu	Met	Leu	Pro	Glu	Ser	Phe	Ser	Glu	Glu	Asp	Leu	Phe	195	200	205	
Ile	Glu	Ile	Ala	Gly	Leu	Ser	Tyr	Ser	Gly	Asp	Phe	Arg	Met	Val	Ile	210	215	220	
Gly	Glu	Glu	Lys	Ser	Lys	Val	Leu	Asn	Ile	Val	Lys	Pro	Asn	Val	Gly	225	230	235	240
His	Phe	Arg	Glu	Leu	Tyr	Glu	Ser	Ile	Leu	Gln	Lys	Asp	Pro	Gln	Val	245	250	255	
Val	Tyr	Lys	Met	His	Gln	Gly	Gln	Leu	Glu	Ile	Asp	Lys	Ser	Pro	Glu	260	265	270	
Gly	Gln	Phe	Thr	Gln	Leu	Met	Thr	Leu	Pro	Arg	Thr	Leu	Gln	Gln	Gln	275	280	285	
Ile	Asn	His	Ile	Met	Asp	Pro	Pro	Gly	Arg	Asn	Arg	Asp	Val	Glu	Glu	290	295	300	

Thr Leu Leu Gln Val Ala Gln Asp Pro Asp Cys Gly Asp Val Val Arg
 305 310 315 320

Leu Ala Ile Ser Ser Ile Val Arg Pro Ser Ser Ile Arg Gln Ser Thr
 325 330 335

Lys Gly Leu Phe Thr Ala Gly Met Lys Lys Ser Val Ile Tyr Ser Ser
 340 345 350

Arg Lys Leu Asn Lys Met Trp Lys Gly Trp Met Ser Lys Ala Ser
 355 360 365

<210> 22

<211> 383

<212> PRT

<213> Schizosaccharomyces pombe

<400> 22

Met Ile Phe Gly Lys Thr His Phe Leu Ser Tyr Asn Ile Leu Arg Tyr
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Ser Thr Lys Arg Trp Met Asn Arg His Ser Tyr Ser His His Ala Lys
 20 25 30

Cys Thr Val Ala Gln Leu Leu Lys Gln Asn Leu Leu Thr Phe Glu Asn
 35 40 45

Gln Arg Ile Gln Pro Glu Glu Glu Leu Lys Glu Asn Leu Thr Lys Val
 50 55 60

Val Asn Tyr Phe Gln Ala Pro Ile Asp Val Ala Val Gly Tyr Gly Ser
 65 70 75 80

Gly Val Phe Arg Gln Ala Gly Tyr Ser Gln Lys Glu Asn Pro Met Ile
 85 90 95

Asp Phe Ile Phe Gln Val Glu Asp Pro Val Lys Trp His Lys Ile Asn
 100 105 110

Leu Gln Gln Asn Pro Ser His Tyr Ser Phe Val Lys Asn Phe Gly Pro
 115 120 125

Gly Phe Val Ser Thr Leu Gln Glu Ser Phe Gly Thr Gly Val Tyr Tyr
 130 135 140

Asn Thr His Val Glu Val Glu Gly Asn Ile Ile Lys Tyr Gly Val Thr
 145 150 155 160

Ser Lys Lys Asp Val Tyr Glu Asp Leu Lys Asn Trp Asn Thr Met Tyr
 165 170 175

Leu Ala Gly Arg Phe Gln Lys Pro Val Val Ile Leu Lys Gly Glu Asp
 180 185 190

Glu Phe Tyr Lys Glu Asn Ser Tyr Asn Leu Ser Ser Ala Leu His Val

195	200	205
Gly Leu Leu Met Leu Ala Asp Arg Phe Thr Glu Phe Asp Leu Tyr Lys		
210	215	220
Thr Ile Val Ser Leu Ser Tyr Leu Gly Asp Ile Arg Met Ser Phe Phe		
225	230	235 240
Ala Glu Asn Pro Arg Lys Val Glu Asn Ile Val Ser Lys Gln Ile Ala		
	245	250 255
Phe Phe Arg Lys Leu Tyr Leu Pro Leu Leu Tyr Ala Glu Pro Gly Val		
	260	265 270
His Phe Ile Glu Ser Ser Glu Val Leu Lys Ser Met Asp Pro Ser Asp		
	275	280 285
Asn Ser Arg Tyr Leu Ser Phe His Gln Asn Ile Thr Lys Asp Ser Ile		
	290	295 300
Ser Arg Leu Leu Asn Gly Leu Pro Leu Asn Leu Val Lys Ile Leu Gly		
305	310	315 320
Leu Lys Pro Asp Thr Ser Ser Phe Glu Lys Cys Ala Glu Leu Met Leu		
	325	330 335
Thr Asn Gln Ile Ser Thr Arg Ser Leu Leu Ile Ser Lys Ser Ile Lys		
	340	345 350
Lys Leu Thr Ser Phe Ser Ile Leu Thr Gln Ser Ile Lys Gly Ile Phe		
	355	360 365
Thr Ala Arg Cys His Ser Phe Arg Trp Tyr Met Ser Met Arg Ser		
	370	375 380

<210> 23
 <211> 274
 <212> PRT
 <213> Caenorhabditis elegans

<400> 23
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 20 25 30
 Asp Lys Ser Glu Lys Met Val Asp Phe Val Ile Val Thr Lys Asn Ala
 35 40 45
 Gln Glu Phe His Arg Asp Asn Ile Leu Lys Asn Pro Gln His Tyr Ser
 50 55 60
 Leu Leu Arg Leu Met Gly Pro Lys Met Ile Glu Lys Ile Gln Cys Asn
 65 70 75 80

Phe Ala Ala Arg Val Tyr Tyr Asn Thr His Val Lys Val Gly Lys Arg
 85 90 95
 Lys Ile Lys Tyr Gly Val Ile Ser Tyr Glu Asn Val Lys Gln Asp Leu
 100 105 110
 Leu Asp Trp Arg Trp Ile Tyr Ile Ser Gly Arg Leu His Lys Pro Val
 115 120 125
 Leu Glu Val Ile Lys Pro Arg Gln Asp Met Cys Asp Leu Val Thr Glu
 130 135 140
 Asn Arg Arg Ser Ala Leu His Ser Ser Leu Leu Leu Leu Pro Glu Ser
 145 150 155 160
 Phe Thr Leu Lys Gln Leu Phe His Lys Ile Val Gly Leu Ser Tyr Thr
 165 170 175
 Gly Asp Phe Arg Met Val Val Gly Glu Asp Lys Asn Lys Ile Asn Lys
 180 185 190
 Ile Val Glu Gly Asn Tyr Glu Glu Leu Leu Arg Val Tyr Glu Pro Leu
 195 200 205
 Met Asn Asp Asp Ala Arg Leu Ser Val Ile Phe Ser Leu Ala His Arg
 210 215 220
 His Asp Val Ala Ala Thr Val Glu Thr Ala Ile Gly Gly Ile Ile Arg
 225 230 235 240
 Pro Val Ser Leu Ser Gln Thr Ala Lys Asn Ala Phe Ser Ala Gly Val
 245 250 255
 Thr Arg Ser Ile Ile Tyr Ser Met Ala Lys Met Ser Lys Phe Leu Lys
 260 265 270

Ser Lys

<210> 24

<211> 647

<212> PRT

<213> Drosophila melanogaster

<400> 24

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 Val Ser Tyr Met Phe Ala Tyr Gly Ser Gly Val Lys Gln Gln Glu Gly
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 Tyr Gly Lys Val Gly Asn Gly Asn Asn Leu Arg Pro Pro Pro Gly Thr
 35 40 45
 Val Val Asp Leu Val Phe Cys Val Arg Asp Ala Arg Gly Phe His Ala
 50 55 60

Glu Asn Leu His Arg His Pro Asp His Tyr Ser Ala Leu Arg His Leu
 65 70 75 80
 Gly Pro Asn Phe Val Ala Lys Tyr Gln Glu Arg Leu Gly Ala Gly Val
 85 90 95
 Tyr Cys Asn Thr Leu Val Pro Leu Pro Asp Val Gly Ile Thr Ile Lys
 100 105 110
 Tyr Gly Val Val Ser Gln Glu Glu Leu Leu Glu Asp Leu Leu Asp Trp
 115 120 125
 Arg His Leu Tyr Leu Ala Gly Arg Leu His Lys Pro Val Thr Asn Leu
 130 135 140
 Val Asn Pro Ser Asp Asn Pro Pro Leu Lys Ala Ala Leu Glu Arg Asn
 145 150 155 160
 Leu Val Ser Ala Leu Gln Val Ala Leu Leu Leu Pro Glu Lys Phe
 165 170 175
 Thr Ala Tyr Gly Leu Phe His Thr Ile Ala Gly Leu Ser Tyr Lys Gly
 180 185 190
 Asp Phe Arg Met Ile Phe Gly Glu Asn Lys Gln Lys Val His Asn Ile
 195 200 205
 Val Ser Pro Gln Ile Asn Asp Phe Phe Ala Leu Tyr Gln Pro Ser Leu
 210 215 220
 Gly Gln Leu Ser Asp Tyr Val Ala Val Asn Met Lys Gly Gln Glu Pro
 225 230 235 240
 Gly Ser Arg Lys Pro Ala Ile Ile Phe Glu Gln Asp Lys Ser Ser Ser
 245 250 255
 Ala Thr Cys Gln His Leu Arg Gln Leu Pro Arg Glu Leu Gln Lys Arg
 260 265 270
 Leu Gln Arg Asn Ala Ala Cys Arg Gly Asp Tyr Thr Gln Val Val Asn
 275 280 285
 His Leu Ser Met Ala Ser Gln Leu Pro Glu Val Leu Gln Ala Ser Val
 290 295 300
 Asn Asp Ile Ile Met Ser Ser Asp Asp Asn Ser Ser Asp Ser Asn Ser
 305 310 315 320
 Ser Ser Asp Glu Arg Gln Arg Lys Arg Lys Leu Lys Lys His Ser Lys
 325 330 335
 Asp Val Asp Lys Ser Lys Lys Lys Lys Ser Lys Lys His Lys Lys Glu
 340 345 350
 Lys Arg Arg His Lys Glu Lys Lys Arg Ser Lys His Glu Glu Glu Pro
 355 360 365

Pro Val Pro Tyr Thr Gln Pro Pro His Leu Ile Asn Ala Ser Pro Pro
 370 375 380
 Asp Val Ala Thr Asn Asn Glu Asp Ser Phe Gly Pro Ala Leu Pro Pro
 385 390 395 400
 His Leu Arg Lys Thr Gln Gln Pro Glu Leu Pro Glu Gln Ser Gln Pro
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 Ala Pro Gln Pro Gln Ala Met Ile Gly Pro Val Leu Pro Ser Asn Leu
 420 425 430
 Thr Arg Glu Lys Ser Pro Thr Lys Glu Ala Glu Ala Glu Asp Asp Asp
 435 440 445
 Asp Leu Ala Gly Thr Phe Gly Pro Leu Pro Asn Ala Ser Gln Val Ala
 450 455 460
 Leu Glu Glu Arg Ala Leu Ala Leu Lys Leu Ala Ala Leu Glu Gly Gly
 465 470 475 480
 Gly Leu Gly Thr Ser Thr Asp Gln Asp Val Arg Glu Glu Trp Met Leu
 485 490 495
 Glu Leu Pro Asp Val Gly Leu Lys Ser Gly Leu Ala Ala Leu Ser Asn
 500 505 510
 Met Lys Arg Thr Phe Tyr Gln Gly Lys Glu Arg Pro Asp Phe Ser Asp
 515 520 525
 Arg Ser Ser Trp Thr Lys Thr Pro Gln Ser Glu Ala Asp Ala Ala Ala
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 Ser Gly Pro Lys Ser Leu Ser Ser Lys Glu Leu Glu Gln Met Ala Gln
 545 550 555 560
 Val Lys Tyr Glu Gln Gln Arg Asp Asp Glu Gln Glu Ser Met Ala Lys
 565 570 575
 Arg His Lys Lys Lys His Lys Arg Glu Glu Ser Leu Val Glu Leu His
 580 585 590
 Gln Lys Lys Leu Arg Lys Glu Gln Arg Glu Lys Pro Glu Arg Arg Pro
 595 600 605
 Phe Ser Arg Asp Val Asp Leu Lys Leu Asn Lys Ile Asp Lys Asn Gln
 610 615 620
 Thr Lys Gln Ile Val Asp Lys Ala Lys Ile Leu Asn Thr Lys Phe Ser
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 Arg Gly Gln Ala Lys Tyr Leu
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<210> 25

<211> 332
 <212> PRT
 <213> Arabidopsis thaliana

<400> 25
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 Pro Pro Val Asp Phe Cys Cys Val Tyr Gly Ser Thr Leu His Pro Asn
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 Asn Gln Asp Lys Ser Lys Met Val Asp Tyr Ile Leu Gly Val Ser Asp
 35 40 45
 Pro Ile Lys Trp His Ser Ala Asn Leu Lys Met Asn Ser Asp His Tyr
 50 55 60
 Ala Ser Trp Met Val His Leu Gly Gly Ala Arg Leu Ile Thr Asn Val
 65 70 75 80
 Ala Asp Lys Val Gly Val Gly Val His Phe Asn Pro Phe Val Asn Trp
 85 90 95
 Asn Asp Arg Lys Leu Lys Tyr Gly Val Val Arg Met His Asp Leu Val
 100 105 110
 Gln Asp Ile Leu Asp Trp Lys Arg Phe Tyr Leu Ser Gly Arg Leu Gln
 115 120 125
 Lys Pro Val His Met Leu Val Asp Asn Leu Asp Ile Glu Asp Val Asn
 130 135 140
 Ser Val Asn Lys Arg Ala Ala Ile Ser Ala Ala Leu Leu Leu Leu Pro
 145 150 155 160
 Ser Lys Phe Thr Glu Glu Asp Leu Tyr Ala Lys Ile Cys Ser Leu Ser
 165 170 175
 Tyr Met Gly Asp Leu Arg Met Phe Phe Ala Glu Asp Thr Asn Lys Val
 180 185 190
 Asn Lys Ile Val Lys Gly Gln Phe Asp Leu Phe Gln Ser Met Tyr Lys
 195 200 205
 Pro Phe Leu Glu Glu Cys Glu Thr Lys Asn Leu Leu Arg Phe Ser Ser
 210 215 220
 Ala Glu Ala Ser His Thr Lys Leu Val Gln Asp Ser Ser Leu Ser Ala
 225 230 235 240
 Thr Arg Ser Leu Val Ser Ser Leu Pro Ala Ser Val Arg Ser Gln Met
 245 250 255
 Gly Lys Ser Leu Gly Glu Lys Lys Phe Val Ser Glu Thr Gly Arg Val
 260 265 270
 Met Gly Glu Val Cys Ile Ser Ser Arg Glu Glu Ala Ala Lys Cys Met

275

280

285

Glu Lys Val Met Arg Arg Arg Val Met Val Ser Ser Gly Arg Gln Ala
 290 295 300

Val Ser Gly Phe Leu Ala Ala Gly Ala Ile Asn Ala Thr Met Tyr Leu
 305 310 315 320

Ser Gln Lys Met Arg Lys Ala Trp Asn Ser Arg Ala
 325 330

<210> 26

<211> 983

<212> DNA

<213> Homo sapiens

<400> 26

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<210> 27

<211> 184

<212> PRT

<213> Homo sapiens

<400> 27

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Glu Pro Gln Thr Leu Val Ile Pro Lys Asn Ala Ala Glu Glu Gln Lys
 20 25 30

Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45

Pro Glu Lys Met Ser Glu Trp Ala Pro Arg Pro Pro Pro Glu Phe Val
 50 55 60

Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80

Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
85 90 95

Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
100 105 110

Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
115 120 125

Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
130 135 140

Lys Leu Glu Gln Lys Lys Gln Glu Gly Pro Gly Gln Pro Lys Glu Gln
145 150 155 160

Gly Ser Ser Ser Ser Ala Glu Ala Ser Gly Thr Glu Glu Glu Glu Glu
165 170 175

Val Pro Ser Phe Thr Met Gly Arg
180

<210> 28
<211> 983
<212> DNA
<213> Homo sapiens

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tgtccccctt taccaggagc acggatggtg tctgcaaggc agtgccctctg agtgtcaggg 180
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aagtttcatc ttctttgcca gtaatttctt ctcttttaac ttctggcgct tcttcggcg 540
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atccaatttt tgcttctcag ccatggcatc catgtagtcc tgctgctgat attctctccg 660
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caagtatgac gacacagccg cgg 983

<210> 29
<211> 184
<212> PRT
<213> Homo sapiens

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 Leu Lys Leu Glu Arg Leu Met Lys Asn Pro Asp Lys Ala Val Pro Ile
 35 40 45
 Pro Glu Lys Met Ser Glu Trp Ala Pro Arg Pro Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95
 Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110
 Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125
 Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140
 Lys Leu Glu Gln Lys Lys Gln Glu Gly Pro Gly Gln Pro Lys Glu Gln
 145 150 155 160
 Gly Ser Ser Ser Ser Ala Glu Ala Ser Gly Thr Glu Glu Glu Glu Glu
 165 170 175
 Val Pro Ser Phe Thr Met Gly Arg
 180

<210> 30
 <211> 186
 <212> PRT
 <213> Mus musculus

<400> 30
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 35 40 45
 Pro Glu Lys Met Asn Glu Trp Ala Pro Arg Ala Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95

Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110
 Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125
 Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140
 Lys Leu Glu Gln Lys Lys Gln Lys Glu Glu Pro Ser Gln Cys Gln Glu
 145 150 155 160
 Gln His Ala Ser Ser Ser Asp Glu Ala Ser Glu Thr Glu Glu Glu Glu
 165 170 175
 Glu Glu Pro Ser Val Leu Ile Met Gly Arg
 180 185

<210> 31
 <211> 186
 <212> PRT
 <213> Mus musculus

<400> 31
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 35 40 45
 Pro Glu Lys Met Asn Glu Trp Ala Pro Arg Ala Pro Pro Glu Phe Val
 50 55 60
 Arg Asp Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe His
 65 70 75 80
 Val Tyr Arg His Leu Arg Arg Arg Glu Tyr Gln Arg Gln Asp Tyr Met
 85 90 95
 Asp Ala Met Ala Glu Lys Gln Lys Leu Asp Ala Glu Phe Gln Lys Arg
 100 105 110
 Leu Glu Lys Asn Lys Ile Ala Ala Glu Glu Gln Thr Ala Lys Arg Arg
 115 120 125
 Lys Lys Arg Gln Lys Leu Lys Glu Lys Lys Leu Leu Ala Lys Lys Met
 130 135 140
 Lys Leu Glu Gln Lys Lys Gln Lys Glu Glu Pro Ser Gln Cys Gln Glu
 145 150 155 160
 Gln His Ala Ser Ser Ser Asp Glu Ala Ser Glu Thr Glu Glu Glu Glu

Leu Lys Leu Glu Lys Leu Met Lys Asn Pro Asp Lys Pro Val Val Ile
 50 55 60
 Pro Glu Gln Arg Arg Glu Arg Asp Phe Met Ser Ser Val Pro Thr Phe
 65 70 75 80
 Val Arg Asn Val Met Gly Ser Ser Ala Gly Ala Gly Ser Gly Glu Phe
 85 90 95
 His Val Tyr Arg His Leu Arg Arg Lys Glu Tyr Ala Arg Gln Lys Asn
 100 105 110
 Ile Gln Asn Gln Ser Ala Arg Glu Ala Ala Asp Glu Ala Tyr Gln Gln
 115 120 125
 Lys Leu Asp Asp Asn Arg Arg Ala Ala Glu Glu Lys Thr Ala Lys Lys
 130 135 140
 Arg Ala Lys Arg Leu Lys Arg Lys Gln Arg Ala Lys Lys Pro Arg Glu
 145 150 155 160
 Asp Lys Lys Pro Leu Ala Lys Glu Ala Ser Glu Asp Ser Asn Thr Asp
 165 170 175
 Ser Glu Glu Glu Pro Thr Glu Glu Lys Ala Glu Ser Ser Pro Glu Glu
 180 185 190
 Gly Gln Gln Val Ala Ser Lys Glu Ser Asp Asp Asn Asn Thr Gln Glu
 195 200 205
 Thr Ser Asn Glu Glu Ala Val Asn Ser Asn Thr Glu Ala Lys Ser Ala
 210 215 220
 Glu Asp Thr Asn Ala Val Glu Leu Asp Ser Thr Glu Ala Thr Lys Glu
 225 230 235 240
 Ser Gln Asn Val Asp Gln Glu Gln Asp Lys Pro Val Pro
 245 250

<210> 34
 <211> 2456
 <212> DNA
 <213> Homo sapiens

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<210> 35
 <211> 366
 <212> PRT
 <213> Homo sapiens

<400> 35
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 35 40 45
 Ala Gly Ala Gln Ile His Gln Ser Leu Leu Cys Asp Asn Ala Glu Val
 50 55 60
 Lys Glu Arg Val Thr Leu Lys Pro Arg Ser Val Leu Thr Ser Gln Val
 65 70 75 80
 Val Val Gly Pro Asn Ile Thr Leu Pro Glu Gly Ser Val Ile Ser Leu
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Asp	Ser	Gly	Ala	Asp	Gln	Glu	Lys	Asp	Lys	Val	Lys	Met	Lys	Gly	Tyr	
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Ala	Gly	Met	Asn	Met	Glu	Glu	Glu	Glu	Glu	Leu	Gln	Gln	Asn	Leu	Trp	
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Gly	Leu	Lys	Ile	Asn	Met	Glu	Glu	Glu	Ser	Glu	Ser	Glu	Ser	Glu	Gln	
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Ser	Met	Asp	Ser	Glu	Glu	Pro	Asp	Ser	Arg	Gly	Gly	Ser	Pro	Gln	Met	
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Ser	Leu	Lys	Tyr	Ala	Tyr	Asn	Ile	Ser	Leu	Lys	Glu	Val	Met	Gln	Val	
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Trp	Ser	Pro	Val	Phe	Arg	Asn	Tyr	Ile	Lys	Arg	Ala	Ala	Asp	His	Leu	
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Glu	Ala	Leu	Ala	Ala	Ile	Glu	Asp	Phe	Phe	Leu	Glu	His	Glu	Ala	Leu	
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Gly	Ile	Ser	Met	Ala	Lys	Val	Leu	Met	Ala	Phe	Tyr	Gln	Leu	Glu	Ile	
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<210> 36
 <211> 2456
 <212> DNA
 <213> Homo sapiens

<400> 36

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<210> 37

<211> 641

<212> PRT

<213> Homo sapiens

<400> 37

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Ile Thr Arg Ala Leu Glu Glu His Arg Leu Arg Arg Lys Leu Glu Lys		
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Asn Val Ser Val Met Thr Met Ile Phe Lys Glu Ser Ser Pro Ser His		
	100	105 110
Pro Thr Arg Cys His Glu Asp Asn Val Val Val Ala Val Asp Ser Thr		
	115	120 125
Thr Asn Arg Val Leu His Phe Gln Lys Thr Gln Gly Leu Arg Arg Phe		
	130	135 140
Ala Phe Pro Leu Ser Leu Phe Gln Gly Ser Ser Asp Gly Val Glu Val		
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Arg Tyr Asp Leu Leu Asp Cys His Ile Ser Ile Cys Ser Pro Gln Val		
	165	170 175
Ala Gln Leu Phe Thr Asp Asn Phe Asp Tyr Gln Thr Arg Asp Asp Phe		
	180	185 190
Val Arg Gly Leu Leu Val Asn Glu Glu Ile Leu Gly Asn Gln Ile His		
	195	200 205
Met His Val Thr Ala Lys Glu Tyr Gly Ala Arg Val Ser Asn Leu His		
	210	215 220
Met Tyr Ser Ala Val Cys Ala Asp Val Ile Arg Arg Trp Val Tyr Pro		
225	230	235 240
Leu Thr Pro Glu Ala Asn Phe Thr Asp Ser Thr Thr Gln Ser Cys Thr		
	245	250 255
His Ser Arg His Asn Ile Tyr Arg Gly Pro Glu Val Ser Leu Gly His		
	260	265 270
Gly Ser Ile Leu Glu Glu Asn Val Leu Leu Gly Ser Gly Thr Val Ile		
	275	280 285
Gly Ser Asn Cys Phe Ile Thr Asn Ser Val Ile Gly Pro Gly Cys His		
	290	295 300
Ile Gly Asp Asn Val Val Leu Asp Gln Thr Tyr Leu Trp Gln Gly Val		
305	310	315 320
Arg Val Ala Ala Gly Ala Gln Ile His Gln Ser Leu Leu Cys Asp Asn		
	325	330 335
Ala Glu Val Lys Glu Arg Val Thr Leu Lys Pro Arg Ser Val Leu Thr		

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Ile	Ser	Leu	His	Pro	Pro	Asp	Ala	Glu	Glu	Asp	Glu	Asp	Asp	Gly	Glu	
370					375					380						
Phe	Ser	Asp	Asp	Ser	Gly	Ala	Asp	Gln	Glu	Lys	Asp	Lys	Val	Lys	Met	
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Lys	Gly	Tyr	Asn	Pro	Ala	Glu	Val	Gly	Ala	Ala	Gly	Lys	Gly	Tyr	Leu	
405					410					415						
Trp	Lys	Ala	Ala	Gly	Met	Asn	Met	Glu	Glu	Glu	Glu	Glu	Leu	Gln	Gln	
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Asn	Leu	Trp	Gly	Leu	Lys	Ile	Asn	Met	Glu	Glu	Glu	Ser	Glu	Ser	Glu	
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Ser	Glu	Gln	Ser	Met	Asp	Ser	Glu	Glu	Pro	Asp	Ser	Arg	Gly	Gly	Ser	
450					455					460						
Pro	Gln	Met	Asp	Asp	Ile	Lys	Val	Phe	Gln	Asn	Glu	Val	Leu	Gly	Thr	
465					470					475					480	
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485					490					495						
Glu	Ile	Asn	Ser	Leu	Lys	Tyr	Ala	Tyr	Asn	Val	Ser	Leu	Lys	Glu	Val	
500					505					510						
Met	Gln	Val	Leu	Ser	His	Val	Val	Leu	Glu	Phe	Pro	Leu	Gln	Gln	Met	
515					520					525						
Asp	Ser	Pro	Leu	Asp	Ser	Ser	Arg	Tyr	Cys	Ala	Leu	Leu	Leu	Pro	Leu	
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Leu	Lys	Ala	Trp	Ser	Pro	Val	Phe	Arg	Asn	Tyr	Ile	Lys	Arg	Ala	Ala	
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Asp	His	Leu	Glu	Ala	Leu	Ala	Ala	Ile	Glu	Asp	Phe	Phe	Leu	Glu	His	
565					570					575						
Glu	Ala	Leu	Gly	Ile	Ser	Met	Ala	Lys	Val	Leu	Met	Ala	Phe	Tyr	Gln	
580					585					590						
Leu	Glu	Ile	Leu	Ala	Glu	Glu	Thr	Ile	Leu	Ser	Trp	Phe	Ser	Gln	Arg	
595					600					605						
Asp	Thr	Thr	Asp	Lys	Gly	Gln	Gln	Leu	Arg	Lys	Asn	Gln	Gln	Leu	Gln	
610					615					620						
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Asp																

<210> 38
 <211> 721
 <212> PRT
 <213> Oryctolagus cuniculus

<400> 38

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			20				25							30	
Arg	Gly	Ala	Glu	Glu	Glu	Ser	Pro	Pro	Pro	Leu	Gln	Ala	Val	Leu	Val
		35					40						45		
Ala	Asp	Ser	Phe	Asn	Arg	Arg	Phe	Phe	Pro	Ile	Ser	Lys	Asp	Gln	Pro
	50					55					60				
Arg	Val	Leu	Leu	Pro	Leu	Ala	Asn	Val	Ala	Leu	Ile	Asp	Tyr	Thr	Leu
65					70					75					80
Glu	Phe	Leu	Thr	Ala	Thr	Gly	Val	Gln	Glu	Thr	Phe	Val	Phe	Cys	Cys
				85					90					95	
Trp	Lys	Ala	Ala	Gln	Ile	Lys	Glu	His	Leu	Gln	Lys	Ser	Lys	Trp	Cys
		100						105						110	
Arg	Pro	Thr	Ser	Leu	Asn	Val	Val	Arg	Ile	Ile	Thr	Ser	Glu	Leu	Tyr
		115					120						125		
Arg	Ser	Leu	Gly	Asp	Val	Leu	Arg	Asp	Val	Asp	Ala	Lys	Ala	Leu	Val
	130					135					140				
Arg	Ser	Asp	Phe	Leu	Leu	Val	Tyr	Gly	Asp	Val	Val	Ser	Asn	Ile	Asn
145					150					155					160
Val	Thr	Arg	Ala	Leu	Glu	Glu	His	Arg	Leu	Arg	Arg	Lys	Leu	Glu	Lys
				165					170					175	
Asn	Val	Ser	Val	Met	Thr	Met	Ile	Phe	Lys	Glu	Ser	Ser	Pro	Ser	His
			180					185						190	
Pro	Thr	Arg	Cys	His	Glu	Asp	Asn	Val	Val	Val	Ala	Val	Asp	Ser	Ala
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Thr	Asn	Arg	Ile	Leu	His	Phe	Gln	Lys	Thr	Gln	Gly	Leu	Arg	Arg	Phe
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Ser	Phe	Pro	Leu	Ser	Leu	Phe	Gln	Gly	Ser	Gly	Ala	Gly	Val	Glu	Ile
225					230					235					240
Arg	Tyr	Asp	Leu	Leu	Asp	Cys	His	Ile	Ser	Ile	Cys	Ser	Pro	Gln	Val
			245						250					255	

Ala	Gln	Leu	Phe	Thr	Asp	Asn	Phe	Asp	Tyr	Gln	Thr	Arg	Asp	Asp	Phe	260	265	270	
Val	Arg	Gly	Leu	Leu	Val	Asn	Glu	Glu	Ile	Leu	Gly	Asn	Gln	Ile	His	275	280	285	
Met	His	Val	Thr	Thr	Arg	Glu	Tyr	Gly	Ala	Arg	Val	Ser	Asn	Leu	His	290	295	300	
Met	Tyr	Ser	Ala	Val	Cys	Ala	Asp	Val	Ile	Arg	Arg	Trp	Val	Tyr	Pro	305	310	315	320
Leu	Thr	Pro	Glu	Ala	Asn	Phe	Thr	Asp	Ser	Thr	Ala	Gln	Ser	Cys	Thr	325	330	335	
His	Ser	Arg	His	Asn	Ile	Tyr	Arg	Gly	Pro	Glu	Val	Ser	Leu	Gly	His	340	345	350	
Gly	Ser	Ile	Leu	Glu	Glu	Asn	Val	Leu	Leu	Gly	Ser	Gly	Thr	Val	Ile	355	360	365	
Gly	Ser	Asn	Cys	Ser	Ile	Thr	Asn	Ser	Val	Ile	Gly	Pro	Gly	Cys	Cys	370	375	380	
Ile	Gly	Asp	Asn	Val	Val	Leu	Asp	Arg	Ala	Tyr	Leu	Trp	Lys	Gly	Val	385	390	395	400
Gln	Val	Ala	Ser	Gly	Ala	Gln	Ile	His	Gln	Ser	Leu	Leu	Cys	Asp	His	405	410	415	
Ala	Glu	Val	Lys	Glu	Gln	Val	Thr	Leu	Lys	Pro	His	Cys	Val	Leu	Thr	420	425	430	
Ser	Gln	Val	Val	Val	Gly	Pro	Asn	Ile	Thr	Leu	Pro	Glu	Gly	Ser	Val	435	440	445	
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Phe	Ser	Asp	Asp	Ser	Gly	Val	Asn	Gln	Ala	Lys	Glu	Lys	Ala	Lys	Leu	465	470	475	480
Lys	Gly	Tyr	Asn	Pro	Ala	Glu	Val	Gly	Val	Ala	Gly	Lys	Gly	Tyr	Leu	485	490	495	
Trp	Lys	Ala	Ala	Asp	Met	Asn	Thr	Glu	Lys	Glu	Glu	Glu	Leu	Arg	Gln	500	505	510	
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Ser	Glu	Arg	Ser	Met	Asp	Ser	Glu	Glu	Leu	Asp	Ser	Arg	Ala	Gly	Ser	530	535	540	
Pro	Gln	Leu	Asp	Asp	Ile	Lys	Val	Phe	Gln	Asn	Glu	Val	Leu	Gly	Thr	545	550	555	560

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 Glu Ala Leu Gly Thr Cys Ile Ala Lys Val Leu Met Gly Phe Tyr Gln
 660 665 670
 Leu Glu Ile Leu Ala Glu Glu Thr Ile Leu Ser Trp Phe Gly Gln Arg
 675 680 685
 Asp Val Thr Asp Lys Gly Arg Gln Leu Arg Lys Asn Gln Gln Leu Gln
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<210> 39
 <211> 716
 <212> PRT
 <213> Rattus norvegicus

<400> 39
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 50 55 60
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 65 70 75 80
 Thr Gly Val Gln Glu Thr Phe Val Phe Cys Cys Trp Lys Ala Ala Gln
 85 90 95

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Leu	Ile	Tyr	Gly	Asp	Val	Val	Ser	Asn	Ile	Asn	Ile	Ser	Lys	Ala	Leu	145	150	155
Glu	Glu	His	Arg	Leu	Arg	Arg	Lys	Leu	Glu	Lys	Asn	Val	Ser	Val	Met	165	170	175
Thr	Met	Val	Phe	Lys	Glu	Ser	Ser	Pro	Ser	His	Pro	Thr	Arg	Cys	His	180	185	190
Glu	Asp	Asn	Val	Val	Leu	Ala	Val	Asp	Ser	Thr	Thr	Asn	Arg	Ile	Leu	195	200	205
His	Phe	Gln	Lys	Thr	Gln	Gly	Leu	Arg	His	Phe	Ser	Phe	Pro	Leu	Gly	210	215	220
Leu	Phe	Gln	Gly	Ser	Leu	Asp	Gly	Val	Glu	Ile	Arg	Tyr	Asp	Leu	Leu	225	230	235
Asp	Cys	His	Ile	Ser	Ile	Cys	Ser	Pro	Gln	Val	Ala	Gln	Leu	Phe	Thr	245	250	255
Asp	Asn	Phe	Asp	Tyr	Gln	Thr	Arg	Asp	Asp	Phe	Val	Arg	Gly	Leu	Leu	260	265	270
Val	Asn	Glu	Glu	Ile	Leu	Gly	Asn	Gln	Ile	His	Leu	His	Val	Thr	Ser	275	280	285
Arg	Glu	Tyr	Gly	Ser	Arg	Val	Ser	Asn	Leu	His	Met	Tyr	Ser	Ala	Val	290	295	300
Cys	Thr	Asp	Val	Ile	Arg	Arg	Trp	Val	Tyr	Pro	Leu	Thr	Pro	Glu	Val	305	310	315
Asn	Phe	Thr	Asp	Ser	Ser	Thr	Gln	Ser	Tyr	Thr	His	Ser	Arg	His	Asn	325	330	335
Ile	Tyr	Arg	Gly	Pro	Glu	Val	Ser	Leu	Gly	His	Gly	Ser	Val	Leu	Glu	340	345	350
Glu	Asn	Val	Leu	Leu	Gly	Ala	Gly	Thr	Val	Val	Gly	Ser	Asn	Cys	Ser	355	360	365
Ile	Thr	Asn	Ser	Val	Ile	Gly	Pro	Asn	Cys	His	Ile	Gly	Asp	Asn	Val	370	375	380
Val	Leu	Asp	Gln	Ala	Tyr	Leu	Trp	Gln	Gly	Val	Arg	Val	Ala	Ala	Gly	385	390	395

Ala Gln Ile His Gln Ser Leu Leu Cys Asp Arg Ala Glu Val Lys Glu
 405 410 415
 Arg Val Ile Leu Lys Pro His Cys Val Leu Thr Ser Gln Val Val Val
 420 425 430
 Gly Pro Asp Ile Ile Leu Pro Glu Gly Ser Val Ile Ser Leu His Pro
 435 440 445
 Pro Asp Ala Glu Glu Asp Glu Asp Asp Gly Gln Phe Ser Asp Asp Ser
 450 455 460
 Gly Ala Asp Gln Glu Lys Glu Lys Val Lys Leu Lys Gly Tyr Asn Pro
 465 470 475 480
 Ala Glu Val Gly Pro Glu Gly Gln Gly Tyr Leu Trp Lys Ala Glu Asp
 485 490 495
 Val Asp Glu Lys Glu Asp Glu Glu Leu Arg Gln Ser Leu Trp Gly Leu
 500 505 510
 Met Ile Asn Met Glu Glu Glu Ser Glu Thr Glu Ser Glu Arg Ser Val
 515 520 525
 Asp Pro Glu Glu Leu Asp Ser Arg Ala Gly Ser Pro Gln Leu Asp Asp
 530 535 540
 Ile Arg Val Phe Gln Asn Glu Val Leu Gly Thr Leu Gln Arg Gly Arg
 545 550 555 560
 Glu Glu Asn Ile Ser Cys Asp Asn Leu Val Leu Glu Ile Asn Ser Leu
 565 570 575
 Lys Tyr Ala Tyr Asn Ile Ser Leu Lys Glu Val Met Gln Val Leu Ser
 580 585 590
 His Val Val Leu Glu Phe Pro Leu Gln Gln Val Asp Gly Val Leu Asp
 595 600 605
 Pro Asn Arg Tyr Cys Ala Leu Leu Leu Pro Leu Leu Lys Ala Trp Ser
 610 615 620
 Pro Val Phe Arg Asn Tyr Ile Lys Arg Ala Ala Asp His Leu Glu Ala
 625 630 635 640
 Leu Ala Ala Ile Glu Asp Phe Phe Leu Glu His Glu Thr Leu Val Pro
 645 650 655
 Ser Leu Ala Lys Val Leu Met Ala Phe Tyr Gln Leu Glu Ile Leu Ala
 660 665 670
 Glu Glu Thr Ile Leu Ser Trp Phe Ser Gln Arg Asp Ile Thr Asp Lys
 675 680 685
 Gly Gln Gln Leu Arg Lys Asn Gln Gln Leu Gln Arg Phe Ile Gln Trp
 690 695 700

Leu Arg Glu Ala Glu Glu Glu Ser Ser Asp Asp Asp
 705 710 715

<210> 40
 <211> 730
 <212> PRT
 <213> Arabidopsis thaliana

<400> 40
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 1 5 10 15

Ala Glu Val Gln Ser Arg His Arg Leu Gln Ala Ile Leu Leu Ala Asp
 20 25 30

Ser Phe Ala Thr Lys Phe Arg Pro Val Thr Leu Glu Arg Pro Lys Val
 35 40 45

Leu Leu Pro Ile Val Asn Val Pro Met Ile Asp Tyr Thr Leu Ala Trp
 50 55 60

Leu Glu Ser Ala Gly Ile Glu Glu Val Phe Val Phe Cys Cys Ala His
 65 70 75 80

Ser Met Gln Val Ile Glu Tyr Leu Glu Lys Ser Glu Trp Tyr Ser His
 85 90 95

Pro Asn Leu Leu Val Arg Thr Ile Glu Ser His Lys Ser Ile Ser Ala
 100 105 110

Gly Asp Ala Leu Arg Tyr Met Tyr Glu Gln Gln Thr Glu Thr Ser Gln
 115 120 125

Ile Gln Gly Asp Phe Val Leu Val Ser Gly Asp Thr Val Ser Asn Met
 130 135 140

Pro Leu Ala Asp Leu Ile Gln Glu His Arg Glu Arg Lys Lys Lys Asp
 145 150 155 160

Glu Lys Ala Ile Met Thr Met Val Ile Lys Gln Ser Lys Ser Ser Pro
 165 170 175

Leu Thr His Gln Ser Arg Leu Gly Thr Asp Gln Leu Phe Ile Ala Val
 180 185 190

Asp Pro Leu Thr Lys Gln Leu Leu His Tyr Glu Glu Asp Lys Ile Asp
 195 200 205

His Pro Ser Gly Ser Val Cys Leu Glu Lys Ser Leu Leu Asp Thr Asn
 210 215 220

Pro Ser Val Leu Val Cys Asn Asp Met Gln Asp Cys Tyr Ile Asp Ile
 225 230 235 240

Cys Ser Pro Glu Val Leu Ser Leu Phe Glu Asp Asn Phe Asp Tyr Gln

				245				250				255			
His	Leu	Arg	Arg	His	Phe	Val	Lys	Gly	Val	Leu	Val	Asp	Asp	Ile	Met
260								265				270			
Gly	Tyr	Lys	Ile	Phe	Thr	His	Glu	Ile	His	Ser	Ser	Tyr	Ala	Gly	Arg
275								280				285			
Ile	Asp	Asn	Phe	Arg	Ser	Tyr	Asp	Thr	Val	Ser	Lys	Asp	Ile	Ile	Gln
290								295				300			
Arg	Trp	Thr	Tyr	Pro	Tyr	Val	Pro	Asp	Ile	Asn	Phe	Ser	Gly	Asn	Arg
305								310				315			
Pro	Leu	Lys	Leu	Gly	Arg	Gln	Gly	Ile	Tyr	Lys	Ala	Ser	Asp	Val	Val
				325				330				335			
Gln	Ser	Arg	Ser	Ala	Asp	Val	Gly	Ala	Ser	Thr	Val	Ile	Gly	Tyr	Gly
				340				345				350			
Thr	Lys	Ile	Gly	His	Gly	Asp	Lys	Ile	Met	Asn	Ser	Val	Ile	Gly	Asn
				355				360				365			
Gly	Cys	Ser	Ile	Gly	Ser	Asn	Val	Val	Ile	Glu	Gly	Ser	Tyr	Ile	Trp
370				375								380			
Asn	Asn	Val	Thr	Ile	Glu	Asp	Gly	Cys	Glu	Ile	Arg	Asn	Ala	Ile	Val
385				390				395				400			
Cys	Asp	Gly	Val	Lys	Ile	Arg	Ala	Gly	Ala	Val	Leu	Gln	Pro	Gly	Val
				405				410				415			
Val	Leu	Ser	Phe	Asn	Val	Val	Val	Gly	Arg	Asp	Phe	Val	Val	Pro	Ala
				420				425				430			
Tyr	Ser	Lys	Val	Ser	Leu	Leu	Gln	Gln	Pro	Thr	Thr	Glu	Asp	Ser	Asp
				435				440				445			
Glu	Glu	Leu	Glu	Tyr	Ala	Asp	Ser	Ser	Ser	Gly	Thr	Ala	Asp	His	Leu
450				455								460			
Ser	Gly	Leu	Asn	Leu	Gln	Met	Glu	Ser	Lys	Ala	Ser	Glu	Leu	Gly	Pro
465				470				475				480			
Asp	Gly	Ala	Gly	Tyr	Ile	Trp	Glu	Val	Cys	Glu	Gly	Ala	His	Asp	Glu
				485				490				495			
Glu	Trp	Lys	His	Ser	Val	Ala	Pro	Ile	Pro	Lys	Asp	Lys	Leu	Ser	Glu
				500				505				510			
Ile	Thr	Gln	Ala	Ile	Asp	Asp	Asp	Asp	Thr	Asp	Asp	Glu	Ser	Val	Val
515				520								525			
Pro	Thr	Ser	Gly	Glu	Leu	Lys	Ser	Asp	Ala	Asp	Ser	Ile	Asn	Thr	Asp
530				535				540							
Val	Asn	Asp	Pro	Asn	Asp	Asp	Tyr	Tyr	Tyr	Phe	Glu	Lys	Glu	Val	Glu

Val	Ile	Asp	Tyr	Leu	Asn	Asn	Ser	Asp	Trp	Tyr	Ser	His	Lys	Asp	Phe	85	90	95
Thr	Val	Lys	Thr	Ile	Glu	Ser	Pro	Gln	Asn	Ser	Thr	Ser	Ala	Gly	Asp	100	105	110
Ala	Leu	Arg	Tyr	Ile	Tyr	Glu	Gln	Gln	Ile	Glu	Thr	Ser	Gln	Ile	Gln	115	120	125
Gly	Asp	Phe	Val	Leu	Val	Asn	Gly	Cys	Ile	Val	Ser	Asn	Met	Pro	Leu	130	135	140
Thr	Gln	Leu	Ile	Gln	Glu	His	Arg	Asp	Arg	Lys	Lys	Lys	Asp	Glu	Lys	145	150	155
Ala	Ile	Met	Thr	Met	Val	Ile	Arg	Gln	Ser	Leu	Ile	Thr	Asp	His	Gln	165	170	175
Leu	Phe	Ile	Ala	Val	Asn	Pro	Leu	Thr	Lys	Gln	Leu	Leu	Tyr	Tyr	Asp	180	185	190
Glu	Asp	Asn	Ile	Cys	Phe	Asp	Lys	Ser	Leu	Leu	Asp	Arg	Asn	Pro	Ser	195	200	205
Val	Leu	Leu	Cys	Ser	Asp	Met	Gln	Asp	Cys	Tyr	Ile	Asp	Ile	Cys	Ser	210	215	220
Leu	Glu	Val	Leu	Ser	Leu	Phe	Val	Asp	Asn	Phe	Asp	Tyr	Gln	His	Met	225	230	235
Arg	Cys	Asp	Phe	Val	Glu	Gly	Val	Leu	Ala	Asp	Asp	Ile	Ile	Gly	Tyr	245	250	255
Lys	Ile	Phe	Thr	His	Glu	Ile	Ser	Ser	Cys	Tyr	Ala	Ser	Arg	Ile	Glu	260	265	270
Asn	Phe	Arg	Ser	Tyr	Asp	Met	Val	Ser	Lys	Asp	Ile	Ile	Gln	Arg	Arg	275	280	285
Thr	Phe	Pro	Tyr	Val	Pro	Asp	Met	Lys	Phe	Ser	Gly	Asn	Arg	Thr	Leu	290	295	300
Lys	Leu	Glu	Arg	Gln	Gly	Ile	Tyr	Lys	Ala	Ser	Asp	Ala	Thr	Gln	Leu	305	310	315
Pro	Ser	Ala	His	Val	Gly	Ala	Ser	Tyr	Val	Ile	Gly	His	Ala	Thr	Asn	325	330	335
Ile	Gly	Ser	Gly	Thr	Lys	Ile	Leu	Asn	Ser	Val	Ile	Gly	Asn	Gly	Cys	340	345	350
Ser	Ile	Gly	Ser	Asn	Val	Val	Ile	Gln	Gly	Ser	Tyr	Ile	Trp	Asn	Asn	355	360	365
Val	Thr	Val	Glu	Asp	Gly	Cys	Glu	Ile	Arg	Asn	Ala	Ile	Val	Cys	Asp	370	375	380

Glu Val Lys Val Cys Ala Gly Ala Ile Val Lys Pro Gly Val Val Leu
 385 390 395 400
 Ser Phe Lys Val Val Val Gly Arg Asp Phe Val Val Pro Ala Tyr Ser
 405 410 415
 Gln Val Ser Leu Leu Arg Gln Pro Met Glu Glu Asp Ser Asp Glu Glu
 420 425 430
 Asn Leu Leu Ser Gly Val Asp Leu Gln Met Glu Ser Lys Leu Gly Leu
 435 440 445
 Asp Gly Ala Gly Tyr Ile Trp Arg Gln Ala Cys Glu Asp Glu Trp Lys
 450 455 460
 His Ser Val Pro Pro Ile Pro Lys Asp Lys Leu Ala Glu Ile Ile Lys
 465 470 475 480
 Ala Ile Asp Asp Asp Asp Thr Asp Asp Glu Ser Val Val Thr Thr Ser
 485 490 495
 Gly Asp Ala Asn Thr Ser Ile Asn Asn Asp Leu Phe Asp Phe Glu Arg
 500 505 510
 Glu Val Asp Gly Thr Phe Leu Arg Ala Val Glu Glu Asn Ile Val Ala
 515 520 525
 Asp Leu Ala Val Leu Glu Ile Asn Ser Leu Arg Leu Ser Tyr Asn Met
 530 535 540
 Glu Ser Ala His Cys Ala Gly Ala Ile Phe Tyr Ser Met Met Lys Leu
 545 550 555 560
 Ala Val Ser Thr Pro His Ser Ser Ile Asn Asp Leu Tyr Arg Asn Ala
 565 570 575
 Ser Ser Ile Ile Thr Arg Trp Lys Gly Leu Leu Gly Phe Tyr Val Lys
 580 585 590
 Lys Ser Asp Glu Gln Ile Glu Val Ile Ser Arg Leu Glu Glu Met Cys
 595 600 605
 Glu Glu Ser Ala His Glu Leu Gly Thr Leu Phe Ala His Ile Leu Arg
 610 615 620
 Tyr Met Tyr Glu Glu Glu Asn Asp Leu Leu Gln Glu Val Ala Ile Leu
 625 630 635 640
 Arg Trp Ser Asp Glu Lys Ala Gly Ala Asp Glu Ser Asp Lys Val Tyr
 645 650 655
 Leu Lys Gln Cys Glu Pro Phe Ile Thr Trp Leu Lys Glu Thr Ser Asp
 660 665 670
 Asp Glu Asp Gly
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<210> 42
 <211> 2004
 <212> DNA
 <213> Homo sapiens

<400> 42
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 aacggaagt taggttacgg tctgagacat caccgccaag ctgggcatcg gggagatggc 180
 cgagactgac cccaagaccg tgcaggacct cacctcggtg gtgcagacac tcctgcagca 240
 gatgcaagat aaatttcaga ccatgtctga ccagatcatt gggagaattg atgatatgag 300
 tagtcgcatt gatgatctgg aaaagaatat cgcggacctc atgacacagg ctgggggtgga 360
 agaactggaa agtgaaaaca agatacctgc caccgaaaag agttgaagggt tgctaataat 420
 ttatactgga atctggcatt tttccaagcc aagagaagat cgaatggctt tttgcagcta 480
 actactatgt gtagacagggt tttatattat aaagtatgca ttcttatcac ctagtatata 540
 gttagtttgt agagtgtttt cccccagtt tcttgaacat ggtatcttca catcttggac 600
 cttggtcagt tgtgctattc attattaaac actaaaactt tggcggttct tgcataacat 660
 tgtcagattt tttagtgtat ttctgtgaag tcattttttt tcttgtcatt cctttttag 720
 tagttgctgt ttggataaaa gttgatgtgt gattttttat taaacaaata gttaaaccctt 780
 caattatagt tagtcttgggt gaagtaagat gttttagtag tttagagttc ttttaattctt 840
 ggcacaacgt gacttttgag ctaacaccaa atagtgtgtt ggcaataactt ttcaaatggc 900
 tgaaaacacc taaaaattgt tcattcagaa atatctgtca ctgctctgtt gccaaaactc 960
 agaatagaac ttagacgtat gtctgagtc ctgagatcac atgctaaagt cgatgaaaag 1020
 taaccactgc cactgtcttg tgtcagaact tttacagtac agaaaataac agaatagcct 1080
 tctgtaatga ggcgtttgtt agagttttgc atgagattct aatacttcag taggacccta 1140
 cctacgtgggt tcactctaaa tggttaccat aaaaaatctg gcaggatttt aaaactcaat 1200
 cagtctttcc tttgagctag tgacttgaaa agaaagagag aaggaaaaga gaccatatta 1260
 agtccatgcc agttgcttgg ctagaatatg atcaacgact tgtagtagac tcaagttttt 1320
 aaaaaacact attttactta aactgtttct tatctaaatt cttgcagagt gtcaatgtta 1380
 tcattgatta tagaagacag ggataatacc tttatctctg gccactcaaa aatgcagtgc 1440
 caggagtgtc aaacctagag gccaaactgt atgacctgga aggtgatcca tatgattgtc 1500
 accacaaagt gcttttacac aaaaacttga aaatttgaaa aacatgattt ttttaagttt 1560
 ctcactcac cagtcttgggt gtttatattg caaatctatc aaagtaagaa ataatttgtg 1620
 ctgtatacaa attacatggg gaacataaag gagttagatc cttctgtgat aaaatgaatt 1680
 caccactctg gttacccaac tacagaacct cctttgatca ggccagtagg ttgtgatgca 1740
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 ggtttagtaga gagtgtgtac ttaggcagga gtcgacctcc tcaagtaatg gaacgatttc 1920
 aaaggcaggc tgccctgacc aaaaatatct gccatgaata aagggtgcctg aaatcctgct 1980
 aaaaaaaaaa aaaaaaaaaa aaaa 2004

<210> 43
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 43
 Met Ala Glu Thr Asp Pro Lys Thr Val Gln Asp Leu Thr Ser Val Val
 1 5 10 15
 Gln Thr Leu Leu Gln Gln Met Gln Asp Lys Phe Gln Thr Met Ser Asp
 20 25 30
 Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu
 35 40 45

Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu
 50 55 60

Glu Ser Glu Asn Lys Ile Pro Ala Thr Gln Lys Ser
 65 70 75

<210> 44
 <211> 2004
 <212> DNA
 <213> Homo sapiens

<400> 44
 tttttttttt tttttttttt ttttagcagg atttcaggca cttttattca tggcagatat 60
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 ctaagtcaca actctcctac aaccgcaacc ggccatatca tttccatttg ccacttccga 180
 ggcttgagaa catcaccagg gacgcagggt tcggatggtc tggtcfaatgc tgcagtgtgt 240
 gtggggcatt cgggggctcc agcctgcac acaacctact ggctgatca aaggagggtc 300
 tgtagttggg taaccagagt ggtgaattca ttttatcaca gaaggatctc actcctttat 360
 gttccccatg taatttgtat acagcacaaa ttatttctta ctttgataga tttgcaatat 420
 aaacaccaag actggtgaga tgagaaactt aaaaaaatca tgtttttcaa attttcaagt 480
 ttttgtgtaa aagcactttg tggtgacaat catatggatc accttccagg tcatcagtat 540
 tggcctctag gtttagcact cctggcactg catttttgag tggccagaga taaaggattt 600
 atccctgtct tctataatca atgataacat tgacactctg caagaattta gataagaaac 660
 agtttaagta aaatagtgtt ttttaaaaac ttgagtctac tacaagtcgt tgatcatatt 720
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 gtactagtct caaaggaaaag actgattgag ttttaaaatc ctgccagatt ttttatggta 840
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 ctctaacaaa cgctcatta cagaaggcta ttctgttatt ttctgtactg taaaagtctt 960
 gacacaagac agtggcagtg gttacttttc atcgacttta gcatgtgac tcagggactc 1020
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 atgaacaatt tttaggtgtt ttcagccatt tgaaaagtat tgccaacaca ctatttggtg 1140
 ttagctcaaa agtcacgttg tgccaagaat taaagaactc taaagtctac aaacatctta 1200
 cttcaccaag actaactata attgaagggt ttactatttg ttttaataaaa aatcacacat 1260
 caacttttat ccaaacagca actactacaa aaggaatgac aagaaaaaaa atgacttcac 1320
 agaaatacac taaaaaatct gacaatgtta tgcaagaacc gccaaagtgt tagtggttaa 1380
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 ggggaaatca ctctacaaac taactatata ctagggtgata agaatgcata ctttataata 1500
 taaaacctgt ctacacatag tagttagctg caaaaagcca ttcgatcttc tcttggcttg 1560
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 cagaccgtaa cctacacttc cgtttgtccg ctcagtcgcc ccgggcccgt gcttctcgcg 1920
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 ggaaggcctc gagggccgcg gcc 2004

<210> 45
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 45
 Met Ala Glu Thr Asp Pro Lys Thr Val Gln Asp Leu Thr Ser Val Val

1	5	10	15
Gln Thr Leu Leu Gln Gln Met Gln Asp Lys Phe Gln Thr Met Ser Asp	20	25	30
Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu	35	40	45
Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu	50	55	60
Glu Ser Glu Asn Lys Ile Pro Ala Thr Gln Lys Ser	65	70	75

<210> 46
 <211> 76
 <212> PRT
 <213> Mus musculus

<400> 46
Met Ala Glu Thr Asp Pro Lys Thr Met Gln Asp Ile Thr Leu Val Val
1 5 10 15
Glu Thr Leu Leu Gln Gln Met Gln Asp Lys Phe Gln Ile Met Ser Asp
20 25 30
Gln Ile Ile Gly Arg Ile Asp Asp Met Ser Ser Arg Ile Asp Asp Leu
35 40 45
Glu Lys Asn Ile Ala Asp Leu Met Thr Gln Ala Gly Val Glu Glu Leu
50 55 60
Asp Pro Glu Asn Lys Ile Pro Thr Ala Gln Lys Ser
65 70 75

<210> 47
 <211> 86
 <212> PRT
 <213> Drosophila melanogaster

<400> 47
Met Thr Asp Leu Arg Asn Glu Met Asp Ser Asp Leu Asp Gln Asn Tyr
1 5 10 15
Ser Leu Asn Ser Asn Ala Asp Pro Lys Asn Met Gln Glu Leu Thr Ile
20 25 30
Tyr Val Gln Asn Leu Leu Gln Asn Val Gln Asp Lys Phe Gln Thr Met
35 40 45
Ser Asp Gln Ile Ile Thr Arg Ile Asp Asp Met Gly Asn Arg Ile Asp
50 55 60
Asp Leu Glu Lys Ser Ile Ala Asp Leu Met Asn Gln Ala Gly Ile Glu
65 70 75 80

Gly Gln Gly Pro Glu Lys
85

<210> 48
<211> 80
<212> PRT
<213> *Caenorhabditis elegans*

<400> 48
Met Ser Asp Glu Lys Ser Thr Thr Pro Thr Ala Gln Leu Asp Ala Pro
1 5 10 15
Ala Asp Gly Asn Met Asn Asp Leu Thr Ser Leu Ile Gln Gly Val Leu
20 25 30
Gln Gln Thr Gln Asp Arg Phe Gln His Met Ser Asp Gln Ile Ile Arg
35 40 45
Arg Ile Asp Asp Met Thr Thr Arg Ile Asp Asp Leu Glu Lys Asn Ile
50 55 60
Asn Asp Leu Leu Gln Ser Asn Gln Val Glu His Pro Pro Ser Ala Gln
65 70 75 80

<210> 49
<211> 99
<212> PRT
<213> *Oryza sativa*

<400> 49
Met Ala Ala Pro Gly Ser Gly Ser Gly Gly Ile Pro Ile Lys Ala Asp
1 5 10 15
Gln Asp Ser Asp Gly Ser Ala Gln Ser Thr Ala Asp Met Thr Ala Phe
20 25 30
Val Gln Asn Leu Leu Met Gln Met Gln Thr Arg Phe Gln Ser Met Ser
35 40 45
Glu Asn Ile Ile Ser Lys Ile Asp Glu Met Gly Ala Arg Ile Asp Glu
50 55 60
Leu Glu Gln Ser Ile Asn Asp Leu Lys Val Glu Met Gly Thr Glu Gly
65 70 75 80
Ile Thr Pro Thr Lys Pro Lys Asp Glu Glu Ser Lys Pro Ala Gly Ser
85 90 95
Ser Ala Glu

<210> 50
 <211> 4204
 <212> DNA
 <213> Homo sapiens

<400> 50
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 ttttaaagga aataaaagaa aaggcagttc ctaagttggt tagcaataat taacatatga 180
 aaataacata agctattgat ctggctatat gttgttcttt gtttcctaaa ttacaagaaa 240
 cgaaagataa tgggtgaggc agctagttag gaactaaatg cttttaaaca attcccccca 300
 cccccacccc gtgtgggtcc tgtgaggag tgggagcatg actgaagtcc catactcacg 360
 ctggccctga tcaagttttc atacctcaca tagctcagcc tgctctgagt tgattctttt 420
 ttattgcttt gattcatgtg gagttgacac tgcattctga agccaagtgg agtttctcat 480
 tacttttgcc caacaaagca ggagagactt caaataaggg tccagaattc ttacactgaa 540
 gaagaaaatt ttccactgt ctctaaccct cctctcttcc actcataatc ttaccctcat 600
 ctctgcttct ctctgctaaa tatgaactgc cacaccacc taagctttgc cttctccttc 660
 atgctataaa tgttcttgt cactccaatg ctttgacaga aggccagagg acattgggtt 720
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 <212> PRT
 <213> Homo sapiens

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Met Lys Leu Ala Ile Asp Ile Asp Pro Val Ile Met Leu Leu Phe Phe
      35             40             45

Leu Leu Leu Leu Ser Val Cys Ile Ser Ser Ser Leu Gly Trp Met Ser
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 <212> DNA
 <213> Homo sapiens

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<210> 53
 <211> 569
 <212> PRT
 <213> Homo sapiens

<400> 53

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 Ile Trp Thr Val Met Pro Pro Met Ser Thr His Arg His Gly Leu Gly
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 Val Ala Thr Leu Glu Gly Pro Met Tyr Ala Val Gly Gly His Asp Gly
 370 375 380
 Trp Ser Tyr Leu Asn Thr Val Glu Arg Trp Asp Pro Glu Gly Arg Gln
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 405 410 415
 Val Ala Leu Asn Asn Lys Leu Tyr Ala Ile Gly Gly Arg Asp Gly Ser
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 <212> DNA
 <213> Homo sapiens

<400> 54

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<211> 728

<212> PRT
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<400> 55

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Lys	Glu	Phe	Asp	Val	Lys	Gln	Ile	Leu	Arg	Leu	Arg	Trp	Arg	Trp	Phe	20	25	30	
Ser	His	Pro	Phe	Gln	Gly	Ser	Thr	Asn	Thr	Gly	Ser	Cys	Leu	Gln	Gln	35	40	45	
Glu	Gly	Tyr	Glu	His	Arg	Gly	Thr	Pro	Val	Gln	Gly	Arg	Leu	Lys	Ser	50	55	60	
His	Ser	Arg	Asp	Arg	Asn	Gly	Leu	Lys	Lys	Ser	Asn	Ser	Pro	Val	His	65	70	75	80
His	Asn	Ile	Leu	Ala	Pro	Val	Pro	Gly	Pro	Ala	Pro	Ala	His	Gln	Arg	85	90	95	
Ala	Val	Gln	Asn	Leu	Gln	Gln	His	Asn	Leu	Ile	Val	His	Phe	Gln	Ala	100	105	110	
Asn	Glu	Asp	Thr	Pro	Lys	Ser	Val	Pro	Glu	Lys	Asn	Leu	Phe	Lys	Glu	115	120	125	
Ala	Cys	Glu	Lys	Arg	Ala	Gln	Asp	Leu	Glu	Met	Met	Ala	Asp	Asp	Asn	130	135	140	
Ile	Glu	Asp	Ser	Thr	Ala	Arg	Leu	Asp	Thr	Gln	His	Ser	Glu	Asp	Met	145	150	155	160
Asn	Ala	Thr	Arg	Ser	Glu	Glu	Gln	Phe	His	Val	Ile	Asn	His	Ala	Glu	165	170	175	
Gln	Thr	Leu	Arg	Lys	Met	Glu	Asn	Tyr	Leu	Lys	Glu	Lys	Gln	Leu	Cys	180	185	190	
Asp	Val	Leu	Leu	Ile	Ala	Gly	His	Leu	Arg	Ile	Pro	Ala	His	Arg	Leu	195	200	205	
Val	Leu	Ser	Ala	Val	Ser	Asp	Tyr	Phe	Ala	Ala	Met	Phe	Thr	Asn	Asp	210	215	220	
Val	Leu	Glu	Ala	Lys	Gln	Glu	Glu	Val	Arg	Met	Glu	Gly	Val	Asp	Pro	225	230	235	240
Asn	Ala	Leu	Asn	Ser	Leu	Val	Gln	Tyr	Ala	Tyr	Thr	Gly	Val	Leu	Gln	245	250	255	
Leu	Lys	Glu	Asp	Thr	Ile	Glu	Ser	Leu	Leu	Ala	Ala	Ala	Cys	Leu	Leu	260	265	270	
Gln	Leu	Thr	Gln	Val	Ile	Asp	Val	Cys	Ser	Asn	Phe	Leu	Ile	Lys	Gln	275	280	285	

Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	Arg	Ser	Phe	Gly	Asp	Ala	Gln	290	295	300	
Gly	Cys	Thr	Glu	Leu	Leu	Asn	Val	Ala	His	Lys	Tyr	Thr	Met	Glu	His	305	310	315	320
Phe	Ile	Glu	Val	Ile	Lys	Asn	Gln	Glu	Phe	Leu	Leu	Leu	Pro	Ala	Asn	325	330	335	
Glu	Ile	Ser	Lys	Leu	Leu	Cys	Ser	Asp	Asp	Ile	Asn	Val	Pro	Asp	Glu	340	345	350	
Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Gln	Trp	Val	Gly	His	Asp	Val	Gln	355	360	365	
Asn	Arg	Gln	Gly	Glu	Leu	Gly	Met	Leu	Leu	Ser	Tyr	Ile	Arg	Leu	Pro	370	375	380	
Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser	Ser	Met	Phe	385	390	395	400
Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala	Met	Lys	Tyr	405	410	415	
His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro	Arg	Thr	Lys	420	425	430	
Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly	Gly	Met	Asp	435	440	445	
Ala	Met	Lys	Gly	Thr	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	Leu	Arg	Thr	Asn	450	455	460	
Ser	Trp	Leu	His	Ile	Gly	Thr	Met	Asn	Gly	Arg	Arg	Leu	Gln	Phe	Gly	465	470	475	480
Val	Ala	Val	Ile	Asp	Asn	Lys	Leu	Tyr	Val	Val	Gly	Gly	Arg	Asp	Gly	485	490	495	
Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Phe	Asn	Pro	Val	Gly	Lys	Ile	500	505	510	
Trp	Thr	Val	Met	Pro	Pro	Met	Ser	Thr	His	Arg	His	Gly	Leu	Gly	Val	515	520	525	
Ala	Thr	Leu	Glu	Gly	Pro	Met	Tyr	Ala	Val	Gly	Gly	His	Asp	Gly	Trp	530	535	540	
Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Glu	Gly	Arg	Gln	Trp	545	550	555	560
Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val	Gly	Val	Val	565	570	575	
Ala	Leu	Asn	Asn	Lys	Leu	Tyr	Ala	Ile	Gly	Gly	Arg	Asp	Gly	Ser	Ser	580	585	590	

Cys Leu Lys Ser Met Glu Tyr Phe Asp Pro His Thr Asn Lys Trp Ser
 595 600 605
 Leu Cys Ala Pro Met Ser Lys Arg Arg Gly Gly Val Gly Val Ala Thr
 610 615 620
 Tyr Asn Gly Phe Leu Tyr Val Val Gly Gly His Asp Ala Pro Ala Ser
 625 630 635 640
 Asn His Cys Ser Arg Leu Ser Asp Cys Val Glu Arg Tyr Asp Pro Lys
 645 650 655
 Gly Asp Ser Trp Ser Thr Val Ala Pro Leu Ser Val Pro Arg Asp Ala
 660 665 670
 Val Ala Val Cys Pro Leu Gly Asp Lys Leu Tyr Val Val Gly Gly Tyr
 675 680 685
 Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp Ala Gln Arg
 690 695 700
 Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg Ala Gly Ala
 705 710 715 720
 Cys Val Val Val Val Lys Leu Pro
 725

<210> 56
 <211> 569
 <212> PRT
 <213> Homo sapiens

<400> 56
 Met Asn Ala Thr Arg Ser Glu Glu Gln Phe His Val Ile Asn His Ala
 1 5 10 15
 Glu Gln Thr Leu Arg Lys Met Glu Asn Tyr Leu Lys Glu Lys Gln Leu
 20 25 30
 Cys Asp Val Leu Leu Ile Ala Gly His Leu Arg Ile Pro Ala His Arg
 35 40 45
 Leu Val Leu Ser Ala Val Ser Asp Tyr Phe Ala Ala Met Phe Thr Asn
 50 55 60
 Asp Val Leu Glu Ala Lys Gln Glu Glu Val Arg Met Glu Gly Val Asp
 65 70 75 80
 Pro Asn Ala Leu Asn Ser Leu Val Gln Tyr Ala Tyr Thr Gly Val Leu
 85 90 95
 Gln Leu Lys Glu Asp Thr Ile Glu Ser Leu Leu Ala Ala Ala Cys Leu
 100 105 110
 Leu Gln Leu Thr Gln Val Ile Asp Val Cys Ser Asn Phe Leu Ile Lys

115					120					125					
Gln	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	Arg	Ser	Phe	Gly	Asp	Ala
130					135					140					
Gln	Gly	Cys	Thr	Glu	Leu	Leu	Asn	Val	Ala	His	Lys	Tyr	Thr	Met	Glu
145					150					155					160
His	Phe	Ile	Glu	Val	Ile	Lys	Asn	Gln	Glu	Phe	Leu	Leu	Leu	Pro	Ala
			165						170					175	
Asn	Glu	Ile	Ser	Lys	Leu	Leu	Cys	Ser	Asp	Asp	Ile	Asn	Val	Pro	Asp
			180					185					190		
Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Gln	Trp	Val	Gly	His	Asp	Val
		195					200					205			
Gln	Asn	Arg	Gln	Gly	Glu	Leu	Gly	Met	Leu	Leu	Ser	Tyr	Ile	Arg	Leu
	210					215					220				
Pro	Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser	Ser	Met
225					230					235					240
Phe	Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala	Met	Lys
			245						250					255	
Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro	Arg	Thr
		260						265					270		
Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly	Gly	Met
	275						280					285			
Asp	Ala	Met	Lys	Gly	Thr	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	Leu	Arg	Thr
	290						295					300			
Asn	Ser	Trp	Leu	His	Ile	Gly	Thr	Met	Asn	Gly	Arg	Arg	Leu	Gln	Phe
305					310					315					320
Gly	Val	Ala	Val	Ile	Asp	Asn	Lys	Leu	Tyr	Val	Val	Gly	Gly	Arg	Asp
			325						330					335	
Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Phe	Asn	Pro	Val	Gly	Lys
		340						345					350		
Ile	Trp	Thr	Val	Met	Pro	Pro	Met	Ser	Thr	His	Arg	His	Gly	Leu	Gly
	355						360					365			
Val	Ala	Thr	Leu	Glu	Gly	Pro	Met	Tyr	Ala	Val	Gly	Gly	His	Asp	Gly
	370					375					380				
Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Glu	Gly	Arg	Gln
385					390					395					400
Trp	Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val	Gly	Val
			405						410				415		
Val	Ala	Leu	Asn	Asn	Lys	Leu	Tyr	Ala	Ile	Gly	Gly	Arg	Asp	Gly	Ser

420	425	430
Ser Cys Leu Lys Ser Met Glu Tyr Phe Asp Pro His Thr Asn Lys Trp		
435	440	445
Ser Leu Cys Ala Pro Met Ser Lys Arg Arg Gly Gly Val Gly Val Ala		
450	455	460
Thr Tyr Asn Gly Phe Leu Tyr Val Val Gly Gly His Asp Ala Pro Ala		
465	470	475 480
Ser Asn His Cys Ser Arg Leu Ser Asp Cys Val Glu Arg Tyr Asp Pro		
485	490	495
Lys Gly Asp Ser Trp Ser Thr Val Ala Pro Leu Ser Val Pro Arg Asp		
500	505	510
Ala Val Ala Val Cys Pro Leu Gly Asp Lys Leu Tyr Val Val Gly Gly		
515	520	525
Tyr Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp Ala Gln		
530	535	540
Arg Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg Ala Gly		
545	550	555 560
Ala Cys Val Val Val Val Lys Leu Pro		
565		

<210> 57
 <211> 748
 <212> PRT
 <213> Homo sapiens

<400> 57
Met Ser Gly Ser Gly Arg Lys Asp Phe Asp Val Lys His Ile Leu Arg
1 5 10 15
Leu Arg Trp Lys Leu Phe Ser His Pro Ser Pro Ser Thr Gly Gly Pro
20 25 30
Ala Gly Gly Gly Cys Leu Gln Gln Asp Gly Ser Gly Ser Phe Glu His
35 40 45
Trp Gly Pro Ser Gln Ser Arg Leu Leu Lys Ser Gln Glu Arg Ser Gly
50 55 60
Val Ser Thr Phe Trp Lys Lys Pro Ser Ser Ser Ser Ser Ser Ser
65 70 75 80
Ser Pro Ser Ser Ser Ser Ser Ser Phe Asn Pro Leu Asn Gly Thr Leu
85 90 95
Leu Pro Val Ala Thr Arg Leu Gln Gln Gly Ala Pro Gly Gln Gly Thr
100 105 110

Gln Gln Pro Ala Arg Thr Leu Phe Tyr Val Glu Ser Leu Glu Glu Glu
 115 120 125
 Val Val Pro Gly Met Asp Phe Pro Gly Pro His Glu Lys Gly Leu Val
 130 135 140
 Leu Gln Glu Leu Lys Val Glu Pro Asp Asn Ser Ser Gln Ala Thr Gly
 145 150 155 160
 Glu Gly Cys Gly His Arg Leu Ser Ser Thr Gly His Ser Met Thr Pro
 165 170 175
 Gln Ser Asp Leu Asp Ser Ser Ser Ser Glu Glu Phe Tyr Gln Ala Val
 180 185 190
 His His Ala Glu Gln Thr Phe Arg Lys Met Glu Ser Tyr Leu Lys Gln
 195 200 205
 Gln Gln Leu Cys Asp Val Ile Leu Ile Val Gly Asn Arg Lys Ile Pro
 210 215 220
 Ala His Arg Leu Val Leu Ser Ser Val Ser Asp Tyr Phe Ala Ala Met
 225 230 235 240
 Phe Thr Ser Asp Val Cys Glu Ala Lys Gln Glu Glu Ile Lys Met Glu
 245 250 255
 Gly Ile Asp Pro Asn Ala Leu Trp Asp Leu Val Gln Phe Ala Tyr Thr
 260 265 270
 Gly Cys Leu Glu Leu Lys Glu Asp Thr Ile Glu Asn Leu Leu Ala Ala
 275 280 285
 Ala Cys Leu Leu Gln Leu Pro Gln Val Val Glu Val Cys Cys His Phe
 290 295 300
 Leu Met Lys Leu Leu His Pro Ser Asn Cys Leu Gly Ile Arg Ala Phe
 305 310 315 320
 Ala Asp Ala Gln Gly Cys Ile Glu Leu Met Lys Val Ala His Ser Tyr
 325 330 335
 Thr Met Glu Asn Ile Met Glu Val Ile Arg Asn Gln Glu Phe Leu Leu
 340 345 350
 Leu Pro Ala Glu Glu Leu His Lys Leu Leu Ala Ser Asp Asp Val Asn
 355 360 365
 Val Pro Asp Glu Glu Thr Ile Phe His Ala Leu Met Met Trp Val Lys
 370 375 380
 Tyr Asp Met Gln Ser Arg Cys Asn Asp Leu Ser Met Leu Leu Ala Phe
 385 390 395 400
 Ile Arg Leu Pro Leu Leu Pro Pro Gln Ile Leu Ala Asp Leu Glu Asn
 405 410 415

His	Ala	Leu	Phe	Lys	Asn	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Ile	Leu	Glu
			420					425					430		
Ala	Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Thr	Leu	Met	Gln	Ser
		435					440					445			
Pro	Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Thr	Leu	Tyr	Ala	Val
		450				455					460				
Gly	Gly	Met	Asp	Asn	Asn	Lys	Gly	Ala	Thr	Thr	Ile	Glu	Lys	Tyr	Asp
465					470					475					480
Leu	Arg	Thr	Asn	Leu	Trp	Ile	Gln	Ala	Gly	Met	Met	Asn	Gly	Arg	Arg
				485					490					495	
Leu	Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asp	Lys	Leu	Phe	Val	Ile	Gly
			500					505					510		
Gly	Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Tyr	Asn	Pro
		515					520					525			
Lys	Thr	Lys	Thr	Trp	Thr	Val	Leu	Pro	Pro	Met	Ser	Thr	His	Arg	His
		530				535					540				
Gly	Leu	Gly	Val	Thr	Val	Leu	Glu	Gly	Pro	Ile	Tyr	Ala	Val	Gly	Gly
545					550					555					560
His	Asp	Gly	Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Gln
				565					570					575	
Ser	Gln	Gln	Trp	Thr	Phe	Val	Ala	Ser	Met	Ser	Ile	Ala	Arg	Ser	Thr
			580					585					590		
Val	Gly	Val	Ala	Ala	Leu	Asn	Gly	Lys	Leu	Tyr	Ser	Val	Gly	Gly	Arg
		595					600					605			
Asp	Gly	Ser	Ser	Cys	Leu	Ser	Ser	Met	Glu	Tyr	Tyr	Asp	Pro	His	Thr
		610				615					620				
Asn	Lys	Trp	Asn	Met	Cys	Ala	Pro	Met	Cys	Lys	Arg	Arg	Gly	Gly	Val
625					630					635					640
Gly	Val	Ala	Thr	Cys	Asp	Gly	Phe	Leu	Tyr	Ala	Val	Gly	Gly	His	Asp
				645				650						655	
Ala	Pro	Ala	Ser	Asn	His	Cys	Ser	Arg	Leu	Leu	Asp	Tyr	Val	Glu	Arg
			660					665					670		
Tyr	Asp	Pro	Lys	Thr	Asp	Thr	Trp	Thr	Met	Val	Ala	Pro	Leu	Ser	Met
		675					680					685			
Pro	Arg	Asp	Ala	Val	Gly	Val	Cys	Leu	Leu	Gly	Asp	Arg	Leu	Tyr	Ala
		690				695					700				
Val	Gly	Gly	Tyr	Asp	Gly	Gln	Thr	Tyr	Leu	Asn	Thr	Met	Glu	Ser	Tyr
705					710					715					720

Asp Pro Gln Thr Asn Glu Trp Thr Gln Met Ala Ser Leu Asn Ile Gly
725 730 735

Arg Ala Gly Ala Cys Val Val Val Ile Lys Gln Pro
740 745

<210> 58
<211> 751
<212> PRT
<213> Mus musculus

<400> 58
Met Ser Gly Ser Gly Arg Lys Asp Phe Asp Val Lys His Ile Leu Arg
1 5 10 15

Leu Arg Trp Lys Leu Phe Ser His Pro Ser Pro Ala Ser Ser Ser Pro
20 25 30

Ala Gly Gly Ser Cys Leu Gln Gln Asp Ser Gly Gly Gly Ser Phe Glu
35 40 45

His Trp Gly Pro Ser Gln Ser Arg Leu Leu Lys Asn Gln Glu Lys Gly
50 55 60

Ser Val Ser Ala Phe Trp Lys Lys Pro Ser Ser Ser Ser Ser Ser
65 70 75 80

Ser Ser Ser Ser Ser Ser Ala Ser Ser Ser Pro Phe Asn Pro Leu Asn
85 90 95

Gly Thr Leu Leu Pro Val Ala Thr Arg Leu Gln Gln Gly Ala Pro Gly
100 105 110

Gln Gly Thr Gln Gln Pro Ala Arg Thr Leu Phe Tyr Val Glu Ser Leu
115 120 125

Glu Glu Glu Val Val Thr Gly Met Asp Phe Pro Gly Pro Gln Asp Lys
130 135 140

Gly Leu Ala Leu Lys Glu Leu Gln Ala Glu Pro Ala Ser Ser Ile Gln
145 150 155 160

Ala Thr Gly Glu Gly Cys Gly His Arg Leu Thr Ser Thr Asn His Ser
165 170 175

Leu Thr Pro Gln Ser Asp Leu Asp Ser Ser Ser Ser Glu Glu Phe Tyr
180 185 190

Gln Ala Val Arg His Ala Glu Gln Ser Phe Arg Lys Met Glu Asn Tyr
195 200 205

Leu Lys Gln Gln Gln Leu Cys Asp Val Ile Leu Ile Val Gly Asn Arg
210 215 220

Lys Ile Pro Ala His Arg Leu Val Leu Ser Ser Val Ser Asp Tyr Phe
225 230 235 240

Ala	Ala	Met	Phe	Thr	Ser	Asp	Val	Cys	Glu	Ala	Lys	Gln	Glu	Glu	Ile	245	250	255	
Lys	Met	Glu	Gly	Ile	Asp	Pro	Asn	Ala	Leu	Trp	Asp	Leu	Val	Gln	Phe	260	265	270	
Ala	Tyr	Thr	Gly	Cys	Leu	Glu	Leu	Lys	Glu	Asp	Thr	Ile	Glu	Asn	Leu	275	280	285	
Leu	Ala	Ala	Ala	Cys	Leu	Leu	Gln	Leu	Pro	Gln	Val	Val	Glu	Val	Cys	290	295	300	
Cys	His	Phe	Leu	Met	Lys	Leu	Leu	His	Pro	Ser	Asn	Cys	Leu	Gly	Ile	305	310	315	320
Arg	Ala	Phe	Ala	Asp	Ala	Gln	Gly	Cys	Ile	Glu	Leu	Met	Lys	Val	Ala	325	330	335	
His	Ser	Tyr	Thr	Met	Glu	Asn	Ile	Met	Glu	Val	Ile	Arg	Asn	Gln	Glu	340	345	350	
Phe	Leu	Leu	Leu	Pro	Ala	Glu	Glu	Leu	His	Lys	Leu	Leu	Ala	Ser	Asp	355	360	365	
Asp	Val	Asn	Val	Pro	Asp	Glu	Glu	Thr	Ile	Phe	His	Ala	Leu	Met	Met	370	375	380	
Trp	Val	Lys	Tyr	Asp	Met	Gln	Arg	Arg	Cys	Ser	Asp	Leu	Ser	Met	Leu	385	390	395	400
Leu	Ala	Phe	Ile	Arg	Leu	Pro	Leu	Leu	Pro	Pro	Gln	Ile	Leu	Ala	Asp	405	410	415	
Leu	Glu	Asn	His	Ala	Leu	Phe	Lys	Asn	Asp	Leu	Glu	Cys	Gln	Lys	Leu	420	425	430	
Ile	Leu	Glu	Ala	Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Thr	Leu	435	440	445	
Met	Gln	Ser	Pro	Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Thr	Leu	450	455	460	
Tyr	Ala	Val	Gly	Gly	Met	Asp	Asn	Asn	Lys	Gly	Ala	Thr	Thr	Ile	Glu	465	470	475	480
Lys	Tyr	Asp	Leu	Arg	Thr	Asn	Leu	Trp	Ile	Gln	Ala	Gly	Met	Met	Asn	485	490	495	
Gly	Arg	Arg	Leu	Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asp	Lys	Leu	Phe	500	505	510	
Val	Ile	Gly	Gly	Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	515	520	525	
Tyr	Asn	Pro	Lys	Thr	Lys	Thr	Trp	Thr	Val	Leu	Pro	Pro	Met	Ser	Thr	530	535	540	

His Arg His Gly Leu Gly Val Thr Val Leu Glu Gly Pro Ile Tyr Ala
545 550 555 560

Val Gly Gly His Asp Gly Trp Ser Tyr Leu Asn Thr Val Glu Arg Trp
565 570 575

Asp Pro Gln Ser Gln Gln Trp Thr Tyr Val Ala Ser Met Ser Ile Ala
580 585 590

Arg Ser Thr Val Gly Val Ala Ala Leu Asn Gly Lys Leu Tyr Ser Val
595 600 605

Gly Gly Arg Asp Gly Ser Ser Cys Leu Ser Ser Met Glu Tyr Tyr Asp
610 615 620

Pro His Thr Asn Lys Trp Ser Met Cys Pro Pro Met Cys Lys Lys Arg
625 630 635 640

Gly Gly Val Gly Val Ala Thr Cys Asp Gly Phe Leu Tyr Ala Val Gly
645 650 655

Gly His Asp Ala Pro Ala Ser Asn His Cys Ser Arg Leu Leu Asp Tyr
660 665 670

Val Glu Arg Tyr Glu Pro Lys Thr Asp Thr Trp Thr Met Val Ala Pro
675 680 685

Leu Ser Met Pro Arg Asp Ala Val Gly Val Cys Leu Leu Gly Asp Arg
690 695 700

Leu Tyr Ala Val Gly Gly Tyr Asp Gly Gln Thr Tyr Leu Asn Thr Met
705 710 715 720

Glu Ser Tyr Asp Pro Gln Thr Asn Glu Trp Thr Gln Met Ala Ser Leu
725 730 735

Asn Ile Gly Arg Ala Gly Ala Cys Val Val Val Ile Lys Gln Pro
740 745 750

<210> 59
<211> 411
<212> PRT
<213> Homo sapiens

<400> 59
Met Glu His Phe Ile Glu Val Ile Lys Asn Gln Glu Phe Leu Leu Leu
1 5 10 15

Pro Ala Asn Glu Ile Ser Lys Leu Leu Cys Ser Asp Asp Ile Asn Val
20 25 30

Pro Asp Glu Glu Thr Ile Phe His Ala Leu Met Gln Trp Val Gly His
35 40 45

Asp Val Gln Asn Arg Gln Gly Glu Leu Gly Met Leu Leu Ser Tyr Ile

50					55					60					
Arg	Leu	Pro	Leu	Leu	Pro	Pro	Gln	Leu	Leu	Ala	Asp	Leu	Glu	Thr	Ser
65					70					75					80
Ser	Met	Phe	Thr	Gly	Asp	Leu	Glu	Cys	Gln	Lys	Leu	Leu	Met	Glu	Ala
				85					90					95	
Met	Lys	Tyr	His	Leu	Leu	Pro	Glu	Arg	Arg	Ser	Met	Met	Gln	Ser	Pro
			100					105					110		
Arg	Thr	Lys	Pro	Arg	Lys	Ser	Thr	Val	Gly	Ala	Leu	Tyr	Ala	Val	Gly
		115					120						125		
Gly	Met	Asp	Ala	Met	Lys	Gly	Thr	Thr	Thr	Ile	Glu	Lys	Tyr	Asp	Leu
	130					135					140				
Arg	Thr	Asn	Ser	Trp	Leu	His	Ile	Gly	Thr	Met	Asn	Gly	Arg	Arg	Leu
	145				150					155					160
Gln	Phe	Gly	Val	Ala	Val	Ile	Asp	Asn	Lys	Leu	Tyr	Val	Val	Gly	Gly
				165					170					175	
Arg	Asp	Gly	Leu	Lys	Thr	Leu	Asn	Thr	Val	Glu	Cys	Phe	Asn	Pro	Val
			180					185					190		
Gly	Lys	Ile	Trp	Thr	Val	Met	Pro	Pro	Met	Ser	Thr	His	Arg	His	Gly
			195				200					205			
Leu	Gly	Val	Ala	Thr	Leu	Glu	Gly	Pro	Met	Tyr	Ala	Val	Gly	Gly	His
	210					215					220				
Asp	Gly	Trp	Ser	Tyr	Leu	Asn	Thr	Val	Glu	Arg	Trp	Asp	Pro	Glu	Gly
	225				230					235				240	
Arg	Gln	Trp	Asn	Tyr	Val	Ala	Ser	Met	Ser	Thr	Pro	Arg	Ser	Thr	Val
			245						250					255	
Gly	Val	Val	Ala	Leu	Asn	Asn	Lys	Leu	Tyr	Ala	Ile	Gly	Gly	Arg	Asp
			260					265					270		
Gly	Ser	Ser	Cys	Leu	Lys	Ser	Met	Glu	Tyr	Phe	Asp	Pro	His	Thr	Asn
			275				280					285			
Lys	Trp	Ser	Leu	Cys	Ala	Pro	Met	Ser	Lys	Arg	Arg	Gly	Gly	Val	Gly
	290					295					300				
Val	Ala	Thr	Tyr	Asn	Gly	Phe	Leu	Tyr	Val	Val	Gly	Gly	His	Asp	Ala
	305				310					315				320	
Pro	Ala	Ser	Asn	His	Cys	Ser	Arg	Leu	Ser	Asp	Cys	Val	Glu	Arg	Tyr
			325						330				335		
Asp	Pro	Lys	Gly	Asp	Ser	Trp	Ser	Thr	Val	Ala	Pro	Leu	Ser	Val	Pro
			340					345					350		
Arg	Asp	Ala	Val	Ala	Val	Cys	Pro	Leu	Gly	Asp	Lys	Leu	Tyr	Val	Val

355 360 365
 Gly Gly Tyr Asp Gly His Thr Tyr Leu Asn Thr Val Glu Ser Tyr Asp
 370 375 380
 Ala Gln Arg Asn Glu Trp Lys Glu Glu Val Pro Val Asn Ile Gly Arg
 385 390 395 400
 Ala Gly Ala Cys Val Val Val Val Lys Leu Pro
 405 410

<210> 60
 <211> 1339
 <212> DNA
 <213> Homo sapiens

<400> 60
 cacgggtccgc ccagaggctt cggagctgcc ggagccgggc ggggccttgg cgggcggccc 60
 cgggagtggc gggcgccggc tgggtggtcgg cgtggctgag gtgagaaact ggcgctgcgg 120
 ctgcctcgga gcacctgttg gtgccggagc ctgctgctgg tctgcgtgtt ggccgccttg 180
 tgcttcgctt ccctggccct ggtccgccgc taccttcacc acctcctgct gtgggtggag 240
 agccttgact cgctgctggg ggtcctgctc ttcgtcgtgg gcttcacgtt ggtctctttc 300
 ccctgcggct ggggctacat cgtgctcaac gtggccgctg gctacctgta cggcttcgtg 360
 ctgggcatgg gtctgatgat ggtgggcgtc ctcatcggca ccttcacgcg ccatgtggtc 420
 tgcaagcggc tcctcaccgc ctgggtggcc gccaggatcc agagcagcga gaagctgagc 480
 gcggttattc gcgtagtgga gggaggaagc ggctgaaag tgggtggcgtt ggccagactg 540
 acaccatac cttttgggct tcagaatgca gtgttttcga ttactgatct ctctattacc 600
 aactatctga tggcatcttc ggttggaact cttcctacc agcttctgaa ttcttacttg 660
 ggtaccaccc tgcggacaat ggaagatgct attgcagaac agagtgttag tggatatatt 720
 gttttttggt tacagattat tataagtata ggctcatgtt tttatgtagt tcatcgagct 780
 caagtggaat tgaatgcagc tattgtagct tgtgaaatgg aactgaaatc ttctctgggt 840
 aaaggcaatc aaccaaatac cagtggctct tcattctaca acaagaggac cctaacattt 900
 tctggagggt gaatcaatgt tgtatgattc taatgagata cgtgattgtc aagagcctag 960
 tgtgctatct aagggtctagc agtcacttca ctagtgggca gagacaagtt ctaattgtat 1020
 tacagcacia acaaaactga ctagttttta aattgcacia tttttttttt ttttaagcaag 1080
 aatcattttc tgggtatgta agtgtaaatt tagatgcaaa tttggctgca cctctttatc 1140
 atgctgttat tggcctatag gtctgcactt tagtgttttt taattgtttt atttctgtgt 1200
 atttacgaac agagaaataa ctcaaatatt atttctgctt agtgtcttta tttataaagc 1260
 ccatgagtag tttgtatgca tctttcctac ttgtaaagat gagtaaaagt atgcagtttt 1320
 aaatttaaaa aaaaaaaaaa 1339

<210> 61
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 61
 Met Gly Leu Met Met Val Gly Val Leu Ile Gly Thr Phe Ile Ala His
 1 5 10 15
 Val Val Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln
 20 25 30
 Ser Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser
 35 40 45

Gly Leu Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly
 50 55 60
 Leu Gln Asn Ala Val Phe Ser Ile Thr Asp Leu Ser Leu Pro Asn Tyr
 65 70 75 80
 Leu Met Ala Ser Ser Val Gly Leu Leu Pro Thr Gln Leu Leu Asn Ser
 85 90 95
 Tyr Leu Gly Thr Thr Leu Arg Thr Met Glu Asp Val Ile Ala Glu Gln
 100 105 110
 Ser Val Ser Gly Tyr Phe Val Phe Cys Leu Gln Ile Ile Ile Ser Ile
 115 120 125
 Gly Leu Met Phe Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala
 130 135 140
 Ala Ile Val Ala Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly
 145 150 155 160
 Asn Gln Pro Asn Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu
 165 170 175
 Thr Phe Ser Gly Gly Gly Ile Asn Val Val
 180 185

<210> 62
 <211> 512
 <212> DNA
 <213> Homo sapiens

<400> 62
 ggggtcctgct cttcgctcgt ggcttcacgt tggctctctt cccctgcggc tggggctaca 60
 tcgtgctcaa cgtggccgct ggctacctgt acggcttcgt gctgggcatg ggtctgatga 120
 tgggtggcgct cctcatcggc accttcacgt ccatgtgggt ctgcaagcgg ctcctcaccg 180
 cctgggtggc cgccaggatc cagagcagcg agaagctgag cgcggttatt cgcgtagtgg 240
 agggaggaag cggcctgaaa gtgggtggcgc tggccagact gacacccata ccttttgggc 300
 ttcagaatgc agtgttttcg attattataa gtataggcct catgttttat gtagttcatt 360
 gagctcaagt ggaattgaat gcagctattg tagcttgtga aatggaactg aaatcttctc 420
 tgggttaaagg caatcaacca aataccagtg gctcttcatt ctacaacaag aggaccctaa 480
 cattttcttg aggtggaatc aatgttgtat ga 512

<210> 63
 <211> 134
 <212> PRT
 <213> Homo sapiens

<400> 63
 Met Gly Leu Met Met Val Gly Val Leu Ile Gly Thr Phe Ile Ala His
 1 5 10 15
 Val Val Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln
 20 25 30

Ser Ser Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser
 35 40 45
 Gly Leu Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly
 50 55 60
 Leu Gln Asn Ala Val Phe Ser Ile Ile Ile Ser Ile Gly Leu Met Phe
 65 70 75 80
 Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala Ala Ile Val Ala
 85 90 95
 Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly Asn Gln Pro Asn
 100 105 110
 Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu Thr Phe Ser Gly
 115 120 125
 Gly Gly Ile Asn Val Val
 130

<210> 64
 <211> 690
 <212> DNA
 <213> Homo sapiens

<400> 64
 atgggcttca tcgtggtctc tttccctgc ggctggggct acatcgtgct caacgtggcc 60
 gctggctacc tgtacggctt cgtgctgggc atgggtctga tgatgggtgg cgctcctc 120
 ggcaccttca tcgcccattg ggtctgcaag cggctcctca ccgctgggt ggccgccagg 180
 atccagagca gcgagaagct gagecggtt attcgcgtag tggagggagg aagcggcctg 240
 aaagtgggtg cgctggccag actgacaccc ataccttttg ggcttcagaa tgcgggtgtt 300
 tcgattactg atctctcatt acccaactat ctgatggcat ctgcggttgg actgcttctc 360
 acccagcttc tgaattctta cttgggtacc accctgcgga caatggaaga tgtcattgca 420
 gaacagagtg ttagtggata ttttgttttt tgtttacaga ttattataag tataggcctc 480
 atgttttatg tagttcatcg agctcaagtg gaattgaatg cagctattgt agcttgtgaa 540
 atggaactga aatcttctct ggtaaaggc aatcaaccaa ataccagtgg ctcttcattc 600
 tacaacaaga ggaccctaac attttctgga ggtggaatca atgttgtatg attctaata 660
 gatacgtgat tgtaagagc ctagtgtga 690

<210> 65
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 65
 Met Gly Phe Ile Val Val Ser Phe Pro Cys Gly Trp Gly Tyr Ile Val
 1 5 10 15
 Leu Asn Val Ala Ala Gly Tyr Leu Tyr Gly Phe Val Leu Gly Met Gly
 20 25 30
 Leu Met Met Val Gly Val Leu Ile Gly Thr Phe Ile Ala His Val Val
 35 40 45

Cys Lys Arg Leu Leu Thr Ala Trp Val Ala Ala Arg Ile Gln Ser Ser
 50 55 60
 Glu Lys Leu Ser Ala Val Ile Arg Val Val Glu Gly Gly Ser Gly Leu
 65 70 75 80
 Lys Val Val Ala Leu Ala Arg Leu Thr Pro Ile Pro Phe Gly Leu Gln
 85 90 95
 Asn Ala Val Phe Ser Ile Thr Asp Leu Ser Leu Pro Asn Tyr Leu Met
 100 105 110
 Ala Ser Ser Val Gly Leu Leu Pro Thr Gln Leu Leu Asn Ser Tyr Leu
 115 120 125
 Gly Thr Thr Leu Arg Thr Met Glu Asp Val Ile Ala Glu Gln Ser Val
 130 135 140
 Ser Gly Tyr Phe Val Phe Cys Leu Gln Ile Ile Ile Ser Ile Gly Leu
 145 150 155 160
 Met Phe Tyr Val Val His Arg Ala Gln Val Glu Leu Asn Ala Ala Ile
 165 170 175
 Val Ala Cys Glu Met Glu Leu Lys Ser Ser Leu Val Lys Gly Asn Gln
 180 185 190
 Pro Asn Thr Ser Gly Ser Ser Phe Tyr Asn Lys Arg Thr Leu Thr Phe
 195 200 205
 Ser Gly Gly Gly Ile Asn Val Val
 210 215

<210> 66
 <211> 209
 <212> PRT
 <213> Synechococcus sp.

<400> 66
 Met Ala Asp Tyr Leu Leu Asn Ala Leu Gln Trp Ile Asp Gly Leu Gly
 1 5 10 15
 Thr Trp Ala Ala Ile Ala Phe Met Leu Leu Tyr Thr Val Ala Thr Val
 20 25 30
 Val Phe Leu Pro Gly Ser Ile Leu Thr Leu Gly Ala Gly Val Val Phe
 35 40 45
 Gly Val Ile Leu Gly Ser Ile Tyr Val Phe Ile Gly Ala Thr Leu Gly
 50 55 60
 Ala Thr Ala Ala Phe Leu Val Gly Arg Tyr Leu Ala Arg Gly Trp Val
 65 70 75 80
 Ala Lys Lys Ile Ala Gly Asn Gln Lys Phe Lys Ala Ile Asp Glu Ala

	85		90		95
Val Gly Lys Glu Gly Leu Lys Ile	Val Ile Leu Thr Arg Leu Ser Pro				
100	105	110			
Val Phe Pro Phe Asn Leu Leu Asn Tyr Ala Tyr Gly Ile Thr Asn Val					
115	120	125			
Ser Leu Lys Asp Tyr Val Ile Gly Ser Leu Gly Met Ile Pro Gly Thr					
130	135	140			
Ile Met Tyr Val Tyr Ile Gly Ser Leu Ala Gly Ser Leu Ala Thr Leu					
145	150	155			160
Gly Thr Ala Thr Asn Gln Ala Asn Pro Thr Leu Gln Trp Thr Ile Arg					
165	170	175			
Ile Val Gly Phe Ile Ala Thr Val Ala Val Thr Ile Tyr Val Thr Lys					
180	185	190			
Ile Ala Arg Lys Ala Leu Asn Glu Ala Ile Leu Thr Ser Glu Val Asp					
195	200	205			

Glu

<210> 67
 <211> 444
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 67

His Asn Arg Lys Arg Asn Ser Cys Trp Gly Arg Ala His Ser Phe Leu					
1	5	10	15		
Thr Arg Asn Trp Tyr Leu Gly Cys Leu Val Pro Ala Thr Ile Leu Gly					
20	25	30			
Ala Leu Val Phe Ile Gly Trp Ala Thr Arg Asp Tyr Ala Arg Gln Leu					
35	40	45			
Leu Phe Trp Ile Glu Met Gln Asn Ala Trp Ile Thr Phe Ala Val Tyr					
50	55	60			
Met Gly Leu Phe Ala Leu Val Ser Phe Pro Val Val Val Gly Tyr Phe					
65	70	75	80		
Val Leu Leu Ile Thr Ala Gly Tyr Leu Phe Gly Cys Leu Arg Gly Trp					
85	90	95			
Val Thr Val Ile Leu Gly Ala Asn Ile Gly Ile Ala Val Ala His Ala					
100	105	110			
Thr Ile Arg Ser Cys Arg His Arg Ile Pro Val Gln Ser Pro Tyr Ile					
115	120	125			

Thr	His	Cys	Ser	Val	Cys	Phe	Leu	Tyr	Ser	Pro	Met	Leu	Arg	Phe	Leu	130	135	140
Arg	Asn	Phe	Lys	Tyr	Tyr	Ala	Trp	Gln	Glu	Val	Arg	Arg	Gly	Cys	Ser	145	150	155
Val	Val	Ala	Pro	Pro	Asp	Arg	Ser	Asp	Val	Leu	Leu	Val	Leu	Pro	Thr	165	170	175
Val	Trp	Pro	Ser	Glu	Leu	Thr	Lys	Arg	Ile	Arg	Pro	Leu	Ser	Val	Pro	180	185	190
Asp	Leu	Ile	Glu	Lys	Phe	Ser	Cys	Asp	Ala	Pro	Gly	Gly	Gln	Phe	Ala	195	200	205
Thr	Met	Ser	Glu	Tyr	Leu	Arg	Ser	Asp	Pro	Arg	Pro	Asp	Gly	Val	Leu	210	215	220
Leu	Pro	Asp	Glu	Ile	Asp	Leu	His	Arg	Lys	Met	Ser	Leu	Asp	Asp	Leu	225	230	235
Asn	Ser	Tyr	Met	His	Ala	Lys	Asp	Ala	Phe	Lys	Glu	Pro	His	Arg	Lys	245	250	255
Asn	Arg	Ile	Phe	Ser	His	Val	Leu	Val	Val	Ala	Gly	Ala	Asp	Ser	Ala	260	265	270
Arg	Ser	Tyr	Pro	Phe	Arg	Gln	Arg	Pro	Asp	Phe	Leu	Tyr	Leu	Cys	Asp	275	280	285
Cys	Leu	Arg	Pro	Gly	Ala	Ala	Leu	Val	Leu	Thr	Arg	Ser	Arg	Lys	Arg	290	295	300
Asn	Thr	Gly	Ala	Leu	Leu	Phe	Leu	Ser	Gln	Asp	Val	Asp	Ser	Gln	Leu	305	310	315
Ser	Thr	Ile	Phe	Ser	His	Met	His	Tyr	Val	Asp	Asp	Val	Leu	Pro	Leu	325	330	335
Ala	Met	Leu	Lys	Lys	Ser	Leu	Leu	Trp	Leu	Leu	Arg	Asp	His	Ser	Pro	340	345	350
Glu	Leu	Trp	His	Phe	Tyr	Asp	Pro	Ser	Ser	Pro	Val	Ser	Cys	Ile	Val	355	360	365
Gln	Glu	Val	Ala	Asn	Glu	Ala	Lys	Ile	Pro	Met	Gly	Asn	Pro	Arg	Tyr	370	375	380
Ile	Leu	Gln	Tyr	Thr	Arg	Thr	Val	Lys	Thr	Ser	Arg	Glu	Leu	Arg	Ala	385	390	395
Leu	Arg	Arg	Ala	Asn	Ala	Thr	Ala	Ala	Asp	Ser	Met	Ala	Glu	Val	Ile	405	410	415
Ala	Gln	His	His	Gln	Ile	Pro	Gln	Glu	Leu	Ala	Ala	Ser	Phe	Asp	Tyr	420	425	430

Lys Cys Arg Leu Arg His Ala Arg Pro Asp Val Thr
 435 440

<210> 68
 <211> 269
 <212> PRT
 <213> Arabidopsis thaliana

<400> 68
 Met Ser Phe Thr Pro Ser Thr Phe Arg Ile Ala Ile Ser Leu Leu Leu
 1 5 10 15

Leu Val Ala Ile Val Ser Ala Val Ile Phe Leu Pro Lys Leu Lys Asp
 20 25 30

Phe Leu Leu Trp Ile Lys Glu Asp Leu Gly Pro Phe Gly Pro Leu Ala
 35 40 45

Leu Ala Leu Ala Tyr Ile Pro Leu Thr Ile Val Ala Val Pro Ala Ser
 50 55 60

Val Leu Thr Leu Gly Gly Gly Tyr Leu Phe Gly Leu Pro Val Gly Phe
 65 70 75 80

Val Ala Asp Ser Leu Gly Ala Thr Leu Gly Ala Thr Ala Ala Phe Leu
 85 90 95

Leu Gly Arg Thr Ile Gly Lys Ser Tyr Val Thr Ser Lys Ile Lys His
 100 105 110

Tyr Pro Lys Phe Gln Ala Val Ser Val Ala Ile Gln Lys Ser Gly Phe
 115 120 125

Lys Ile Val Leu Leu Leu Arg Val Val Pro Ile Leu Pro Phe Asn Met
 130 135 140

Leu Asn Tyr Leu Leu Ser Val Thr Pro Val Arg Leu Gly Glu Tyr Met
 145 150 155 160

Leu Ala Thr Trp Leu Gly Met Met Gln Pro Ile Thr Phe Ala Leu Val
 165 170 175

Tyr Val Gly Thr Thr Leu Lys Asp Leu Ser Asp Ile Thr His Gly Trp
 180 185 190

His Glu Val Ser Val Phe Arg Trp Val Ile Met Met Val Gly Val Ala
 195 200 205

Leu Ala Val Ile Leu Ile Ile Cys Ile Thr Arg Val Ala Lys Ser Ser
 210 215 220

Leu Asp Lys Ala Leu Ala Glu Asn Gly Thr Glu Leu Asp Gly Lys Lys
 225 230 235 240

Asn Asp Asp Ala Ser Val Leu Pro Ile Ala Glu Pro Pro Pro Asp Leu
 245 250 255

Gln Glu Pro Leu Val Ile Arg Ile Asp Pro Ser Asn Thr
 260 265

<210> 69
 <211> 225
 <212> PRT
 <213> unidentified bacterium

<400> 69
 Met Val Ser Pro Trp Leu Pro Glu Phe Ala Gly Trp Val His Ser Leu
 1 5 10 15
 Gly Val Trp Ala Pro Ile Ala Phe Val Ala Ala Tyr Ile Ala Val Val
 20 25 30
 Val Leu Met Leu Pro Ala Phe Leu Leu Ile Met Ala Gly Gly Ala Val
 35 40 45
 Phe Gly Val Val Glu Gly Ser Leu Leu Ala Leu Leu Gly Ala Val Leu
 50 55 60
 Gly Gly Thr Ala Ala Phe Leu Ile Gly Arg His Tyr Ala Arg Ala Ala
 65 70 75 80
 Val Glu Arg Arg Val Ala Ser Asn Pro Thr Leu Ser Ala Leu Asp His
 85 90 95
 Val Ile Gly Glu Asp Gly Leu Lys Leu Val Phe Leu Leu Arg Leu Ser
 100 105 110
 Pro Ala Val Pro Phe Val Leu Thr Asn Tyr Ala Leu Ser Ile Thr Arg
 115 120 125
 Val Arg Leu Arg Asp Phe Phe Ile Gly Thr Leu Gly Leu Ala Pro Ile
 130 135 140
 Val Val Met Tyr Ala Ala Tyr Gly Ser Ala Ser Gly Ala Thr Pro Asn
 145 150 155 160
 Ala Asp Gly Ser Ala Ala Val Thr Pro Met Met Phe Thr Ala Gly Ile
 165 170 175
 Val Val Thr Val Leu Leu Gly Leu Leu Leu Ala Lys Ile Val Gln Lys
 180 185 190
 Ala Leu Arg Glu Ala Glu Leu Ser Arg Leu Lys Gln Leu Glu Ile Asp
 195 200 205
 Ala Thr Pro Glu Thr Pro Thr Val Leu Pro Thr Pro Ile Thr Glu Ser
 210 215 220
 Ile
 225

<210> 70
 <211> 6540
 <212> DNA
 <213> Homo sapiens

<400> 70
 ctggagttcc tttattcttg ggatagctca agtccactgc caatggctga cagtcattaa 60
 tacacaggca gaaaaaagaa ataagctgct gtgtctgcag ttgggagggg agcactggga 120
 aggacagaat ggaagttact gtatccagat accagcggcc ttacattttt aaacatggag 180
 aggaaggaac aggcagatta aaaagtgaag aatggcagtt tacagagaag gcctaactgt 240
 tggagaatga gtacgagatg aagggaagca gctttgatag caaaccaggg gaataaggca 300
 gttatctgcc agtatctact gcttcaaaga gaagctcaag catcatctaa gtagttttac 360
 acagggagtg agactgagtt tgggtggggat ttcatagagt aatgggataa aaattcaggc 420
 actgctcatt cagttccaag gttctcttgc aaccagttt tgagctggag ggaatttgtt 480
 tttggtacat atttatgttt gaatgcaagc cagcccacat tcgacaggca cggagctctt 540
 tcatgctcag aaaagggaaa aaaaagttcc tgttcttgta tattctttca tcctaaacct 600
 gagacactta acaagaagcc ggtgttggca aagggtgtgtg tgtgtgtgtg tgtctgtgtg 660
 tgtgtgtcct aacgaaatgc acatatattgc tgcagtgaag gagccagttt ttccataaat 720
 ggctaacagg aatttgatga agtggttgca acattaaatg tgtgtgggt cacgttgtaa 780
 cttacattgt tccccagcct ccaactttcc ttgtttccta accaacctcc atcccgcccc 840
 acatgccaca ttcatccagg ccttcaatag gtctgctgtc agttcccata aactggctca 900
 ggttgtagaa atggttagtg aagtcgggca tctcagccat tcccacctct tacttcccaa 960
 ggtgtctcat gtcaccaaat tacaatcat ccacaagcag aagatcaaat ccaggctgac 1020
 taaagccatg tggaatgtgg acacttgggg gcagttaaat accttacagg tttctgctgt 1080
 aagatttgaa gctttgaagg cagaaatcaa tggccagatt ttcaaaggaa aaggttacag 1140
 gtgtgtccag gtgagcccca gacagatgga tctgtgaaag caagtgcctg tgcaggtgca 1200
 gtgactgtc tggccatatg tctgtacag acatgggctg cagaggaagg aacaagactg 1260
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 atttatgcac tgatggctcc taactctaaa tctccacccc gaccttctc ctgagctccc 1740
 gattcaaaat cttatggcct gtccatcctc ttggatatct aatagagctc ccaaagttaa 1800
 tgtgtccaaa cctgaacccc agattcgcca ctatgttccc aaatcccact atgggttagt 1860
 ctcccccatc tcagaaagta accctccatt tacccaagtg gtctggacaa aagtttgga 1920
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 aaactttaaa aaggcaggga aaggttcttc tctagagcct ccagagggaa caggactctg 3000
 ttaacacctc aatctcagcc ttccagcctc cagactgtga gagaataaag ccatcaagtt 3060

tgtggttatt	agttacagca	ggcttaggaa	actaatacag	ccaaacattt	ctctagatgc	3120
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cttccattgt	agatctgagt	gcattgagga	gctcaccccc	agcagttcct	atcatcccag	3240
ctcaggcctc	agacatcaag	aagcaggaga	caagccatct	ctgtgtgtcc	tgtccaaaac	3300
cctgagccat	agacttcatg	ggcataacaa	aatggtttgt	gtttgagccc	ataaagttgg	3360
agtgttttgt	tgtacagcaa	tagtaactgc	aacaaaaatc	aaaataattc	ctctctgatg	3420
gtggggcatg	gggaagatga	aggaaagaga	tatagtgaat	cacatctttg	tcagaaagac	3480
agtgggttca	tttgagtagt	tggattatgt	atttcccaga	gccatctctc	aggataaacc	3540
taagcttctt	caggatacaa	ggaaatttcc	tggaaatccta	aacattttaga	aaaacatttc	3600
aaaaaacctc	ggtgtggtac	acttgaaaga	atcttcagtt	tccttgccac	gataacaaat	3660
tagccacata	tatcaacact	gcaccaggca	tctccatagt	cacagtttga	tgcaagtttc	3720
caaatacctc	tgcaaagcag	gcattactgt	tactatttta	caaatgatgc	ctggagaata	3780
tagaaatttc	aactcatgct	ttgaatcctg	aaaaccactt	gaaggcccaa	attcggatgg	3840
tccatctccc	agagttgtct	ctaaataaca	acactgtgta	gaatgagaag	gctgaaatgc	3900
caagtgatct	cagtgacccc	ctttcatgat	attttaagac	tactgccaa	aacaatgttg	3960
tcttagaggc	agcatagggt	agttatcaat	gtaagagaaa	actgccagga	tgccctgcaa	4020
gcccacaatc	ggaagtccag	agcggcaggt	cataaattat	ttttataaga	gaaaaggcca	4080
agcaaggggc	cgttctaaca	gccgtctggc	atccctatcc	tgcaacctgg	gctgagtttg	4140
taccgaattt	ctgctttggg	gcagaaattc	ataccagaaa	aatgtttcgt	gatgcatttt	4200
tgttcagttg	aatagagcca	agaatttggt	ctaattttaa	ttagatgacc	tctgagctga	4260
tatactataa	aaaatattaa	tcaagtaacc	ccagcaaata	ctgatagggt	atcaccaggg	4320
actcaatgat	atcaccagga	tgaaagagaa	cgggtggcct	tttggctggg	atgatccata	4380
attcccacat	aatccacgtc	tataagttag	agagaattgt	caagtacagt	tcagtgtctaa	4440
cctggaaaca	aatagccctt	ataaggctgc	taatccactt	aaaataatca	gttccagatt	4500
attaatttgg	caccctccca	aggatactac	gaggatctgt	cagatttcat	gaacatatag	4560
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<210> 71
 <211> 139
 <212> PRT
 <213> Homo sapiens

<400> 71
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 Phe Pro Cys Phe Leu Thr Asn Leu His Pro Ala Pro His Ala Thr Phe
 20 25 30
 Ile Gln Ala Phe Asn Arg Ser Ala Val Ser Ser His Lys Leu Ala Gln
 35 40 45
 Val Val Glu Met Val Ser Glu Val Gly His Leu Ser His Ser His Leu
 50 55 60
 Leu Leu Pro Lys Val Ser His Val Thr Lys Leu Gln Ile Ile His Lys
 65 70 75 80
 Gln Lys Ile Lys Ser Arg Leu Thr Lys Ala Met Trp Asn Val Asp Thr
 85 90 95
 Trp Gly Gln Leu Asn Thr Leu Gln Val Ser Ala Val Arg Phe Glu Ala
 100 105 110
 Leu Lys Ala Glu Ile Asn Gly Gln Ile Phe Lys Gly Lys Gly Tyr Arg
 115 120 125
 Cys Val Gln Val Ser Pro Arg Gln Met Asp Leu
 130 135

<210> 72
 <211> 2760
 <212> DNA
 <213> Homo sapiens

<400> 72
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 tctgggcctt aatttactta tctataacat aaaaggacct taatatatga ttgagaaggc 780
 ccaaaccacc tttaaaattt agatctgtgt ctcccatca gacctctctg gagacacagg 840

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taccattat aaaagcccaa gaaacagaga agaaaatcat gttttataac ccaagaaatc 1020
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<210> 73

<211> 104

<212> PRT

<213> Homo sapiens

<400> 73

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Met Phe Thr Ile Val Ser Ser Ser Ser Phe Val Pro Ser Leu Lys His
  1                      5                      10                      15

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Phe Leu Phe Pro Pro Gly Ala Ser Lys Leu Gln Leu Ser Leu Gln Ser
      20                      25                      30

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```

Asp Arg Arg Lys Leu Ala Phe Ile Lys His Gln Leu Cys Ala Trp Lys
      35                      40                      45

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Ile His Leu Gln Tyr His Asn Leu Tyr Asn Asn Ser Ala Ile Trp Ile
      50                      55                      60

```

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Ser Leu Ser Ala Phe Phe Phe Cys Leu Phe Gly Trp Leu Val Leu Val
      65                      70                      75                      80

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Val Leu Val Ser Gly Ser His Ser Val Ala Gln Ala Gly Ala Trp Trp
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His Asp His Asn Ser Leu Gln Pro
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<210> 74
<211> 1183
<212> DNA
<213> Homo sapiens

<400> 74
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<210> 75
<211> 261
<212> PRT
<213> Homo sapiens

<400> 75
Met Gly Ser Leu Pro Ser Arg Arg Lys Ser Leu Pro Ser Pro Ser Leu
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Ser Ser Ser Val Gln Gly Gln Gly Pro Val Thr Met Glu Ala Glu Arg
20 25 30
Ser Lys Ala Thr Ala Val Ala Leu Gly Ser Phe Pro Ala Gly Gly Pro
35 40 45
Ala Glu Leu Ser Leu Arg Leu Gly Glu Pro Leu Thr Ile Val Ser Glu
50 55 60
Asp Gly Asp Trp Trp Thr Val Leu Ser Glu Val Ser Gly Arg Glu Tyr
65 70 75 80
Asn Ile Pro Ser Val His Val Gly Lys Val Ser His Gly Trp Leu Tyr
85 90 95

Glu Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly
 100 105 110
 Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly
 115 120 125
 Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg
 130 135 140
 Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp Leu Tyr Ile
 145 150 155 160
 Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val Asp His Tyr
 165 170 175
 Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu Pro Cys Val
 180 185 190
 Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro Leu Pro Val
 195 200 205
 Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp Ser Ser Leu
 210 215 220
 Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu Ser Glu Gly
 225 230 235 240
 Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp Glu Ala Val
 245 250 255
 Ser Leu Asp Asp Ala
 260

<210> 76
 <211> 1183
 <212> DNA
 <213> Homo sapiens

<400> 76
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 tctgtcacag agacacaggc gtggggtcct tggagctcta gct 1183

<210> 77
 <211> 261
 <212> PRT
 <213> Homo sapiens

<400> 77
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 20 25 30
 Ser Lys Ala Thr Ala Val Ala Leu Gly Ser Phe Pro Ala Gly Gly Pro
 35 40 45
 Ala Glu Leu Ser Leu Arg Leu Gly Glu Pro Leu Thr Ile Val Ser Glu
 50 55 60
 Asp Gly Asp Trp Trp Thr Val Leu Ser Glu Val Ser Gly Arg Glu Tyr
 65 70 75 80
 Asn Ile Pro Ser Val His Val Ala Lys Val Ser His Gly Trp Leu Tyr
 85 90 95
 Glu Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly
 100 105 110
 Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly
 115 120 125
 Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg
 130 135 140
 Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp Leu Tyr Ile
 145 150 155 160
 Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val Asp His Tyr
 165 170 175
 Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu Pro Cys Val
 180 185 190
 Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro Leu Pro Val
 195 200 205
 Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp Ser Ser Leu
 210 215 220
 Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu Ser Glu Gly
 225 230 235 240
 Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp Glu Ala Val

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260			
<210> 78			
<211> 197			
<212> PRT			
<213> Homo sapiens			
<400> 78			
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Asn Ile Pro Ser Val His Val Ala Lys Val Ser His Gly Trp Leu Tyr			
20 25 30			
Glu Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly			
35 40 45			
Asn Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly			
50 55 60			
Ser Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg			
65 70 75 80			
Ile Arg His Tyr Arg Ile His Cys Leu Asp Asn Gly Trp Leu Tyr Ile			
85 90 95			
Ser Pro Arg Leu Thr Phe Pro Ser Leu Gln Ala Leu Val Asp His Tyr			
100 105 110			
Ser Glu Leu Ala Asp Asp Ile Cys Cys Leu Leu Lys Glu Pro Cys Val			
115 120 125			
Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro Leu Pro Val			
130 135 140			
Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp Ser Ser Leu			
145 150 155 160			
Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu Ser Glu Gly			
165 170 175			
Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp Glu Ala Val			
180 185 190			
Ser Leu Asp Asp Ala			
195			
<210> 79			
<211> 179			
<212> PRT			
<213> Mus musculus			

<400> 79

Met Pro Ser Val Tyr Val Ala Lys Val Ala His Gly Trp Leu Tyr Glu
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Gly Leu Ser Arg Glu Lys Ala Glu Glu Leu Leu Leu Leu Pro Gly Asn
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Pro Gly Gly Ala Phe Leu Ile Arg Glu Ser Gln Thr Arg Arg Gly Cys
35 40 45

Tyr Ser Leu Ser Val Arg Leu Ser Arg Pro Ala Ser Trp Asp Arg Ile
50 55 60

Arg His Tyr Arg Ile Gln Arg Leu Asp Asn Gly Trp Leu Tyr Ile Ser
65 70 75 80

Pro Arg Leu Thr Phe Pro Ser Leu His Ala Leu Val Glu His Tyr Ser
85 90 95

Glu Leu Ala Asp Gly Ile Cys Cys Pro Leu Arg Glu Pro Cys Val Leu
100 105 110

Gln Lys Leu Gly Pro Leu Pro Gly Lys Asp Thr Pro Pro Pro Val Thr
115 120 125

Val Pro Thr Ser Ser Leu Asn Trp Lys Lys Leu Asp Arg Ser Leu Leu
130 135 140

Phe Leu Glu Ala Pro Ala Ser Gly Glu Ala Ser Leu Leu Ser Glu Gly
145 150 155 160

Leu Arg Glu Ser Leu Ser Ser Tyr Ile Ser Leu Ala Glu Asp Pro Leu
165 170 175

Asp Asp Ala

<210> 80

<211> 281

<212> PRT

<213> Mus musculus

<400> 80

Met Gly Asn Ser Met Lys Ser Thr Ser Pro Pro Ser Glu Arg Pro Leu
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Ser Ser Ser Glu Gly Leu Glu Ser Asp Phe Leu Ala Val Leu Thr Asp
20 25 30

Tyr Pro Ser Pro Asp Ile Ser Pro Pro Ile Phe Arg Arg Gly Glu Lys
35 40 45

Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
50 55 60

Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val

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Tyr	His	Gly	Trp	Leu	Phe	Glu	Gly	Leu	Gly	Arg	Asp	Lys	Ala	Glu	Glu
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Leu	Leu	Gln	Leu	Pro	Asp	Thr	Lys	Ile	Gly	Ser	Phe	Met	Ile	Arg	Glu
			100					105					110		
Ser	Glu	Thr	Lys	Lys	Gly	Phe	Tyr	Ser	Leu	Ser	Val	Arg	His	Arg	Gln
		115					120					125			
Val	Lys	His	Tyr	Arg	Ile	Phe	Arg	Leu	Pro	Asn	Asn	Trp	Tyr	Tyr	Ile
	130					135					140				
Ser	Pro	Arg	Leu	Thr	Phe	Gln	Cys	Leu	Glu	Asp	Leu	Val	Thr	His	Tyr
145					150					155					160
Ser	Glu	Val	Ala	Asp	Gly	Leu	Cys	Cys	Val	Leu	Thr	Thr	Pro	Cys	Leu
			165						170					175	
Ala	Gln	Asn	Ile	Pro	Ala	Pro	Thr	Ser	His	Pro	Ser	Pro	Cys	Thr	Ser
			180					185					190		
Pro	Gly	Ser	Pro	Val	Thr	Leu	Arg	Gln	Lys	Thr	Phe	Asp	Trp	Lys	Arg
	195						200					205			
Val	Ser	Arg	Leu	Gln	Glu	Gly	Ser	Glu	Gly	Ala	Glu	Asn	Pro	Leu	Arg
	210					215					220				
Val	Asp	Glu	Ser	Leu	Phe	Ser	Tyr	Gly	Leu	Arg	Glu	Ser	Ile	Ala	Ser
225					230					235					240
Tyr	Leu	Ser	Leu	Thr	Gly	Asp	Asp	Ser	Ser	Ser	Phe	Asp	Arg	Lys	Lys
			245						250					255	
Lys	Ser	Leu	Ser	Leu	Met	Tyr	Thr	Gly	Ser	Lys	Arg	Lys	Ser	Ser	Phe
		260						265					270		
Phe	Ser	Ala	Pro	Gln	Tyr	Phe	Glu	Asp							
		275					280								

<210> 81
 <211> 276
 <212> PRT
 <213> Homo sapiens

<400> 81
 Met Gly Asn Ser Met Lys Ser Thr Pro Ala Pro Ala Glu Arg Pro Leu
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 Pro Asn Pro Glu Gly Leu Asp Ser Asp Phe Leu Ala Val Leu Ser Asp
 20 25 30
 Tyr Pro Ser Pro Asp Ile Ser Pro Pro Ile Phe Arg Arg Gly Glu Lys
 35 40 45

Leu Arg Val Ile Ser Asp Glu Gly Gly Trp Trp Lys Ala Ile Ser Leu
 50 55 60
 Ser Thr Gly Arg Glu Ser Tyr Ile Pro Gly Ile Cys Val Ala Arg Val
 65 70 75 80
 Tyr His Gly Trp Leu Phe Glu Gly Leu Gly Arg Asp Lys Ala Glu Glu
 85 90 95
 Leu Leu Gln Leu Pro Asp Thr Lys Val Gly Ser Phe Met Ile Arg Glu
 100 105 110
 Ser Glu Thr Lys Lys Gly Phe Tyr Ser Leu Ser Val Arg His Arg Gln
 115 120 125
 Val Lys His Tyr Arg Ile Phe Arg Leu Pro Asn Asn Trp Tyr Tyr Ile
 130 135 140
 Ser Pro Arg Leu Thr Phe Gln Cys Leu Glu Asp Leu Val Asn His Tyr
 145 150 155 160
 Ser Glu Val Ala Asp Gly Leu Cys Cys Val Leu Thr Thr Pro Cys Leu
 165 170 175
 Thr Gln Ser Thr Ala Ala Pro Ala Val Arg Ala Ser Ser Ser Pro Val
 180 185 190
 Thr Leu Arg Gln Lys Thr Val Asp Trp Arg Arg Val Ser Arg Leu Gln
 195 200 205
 Glu Asp Pro Glu Gly Thr Glu Asn Pro Leu Gly Val Asp Glu Ser Leu
 210 215 220
 Phe Ser Tyr Gly Leu Arg Glu Ser Ile Ala Ser Tyr Leu Ser Leu Thr
 225 230 235 240
 Ser Glu Asp Asn Thr Ser Phe Asp Arg Lys Lys Lys Ser Ile Ser Leu
 245 250 255
 Met Tyr Gly Gly Ser Lys Arg Lys Ser Ser Phe Phe Ser Ser Pro Pro
 260 265 270
 Tyr Phe Glu Asp
 275

<210> 82
 <211> 5193
 <212> DNA
 <213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

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Ser Asn Leu Ser Val His Thr Glu Asn Pro Asp Leu Thr Pro Cys Phe
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Gln Asn Ser Leu Leu Ala Trp Val Pro Cys Ile Tyr Leu Trp Val Ala
          35             40             45

Leu Pro Cys Tyr Leu Leu Tyr Leu Arg His His Cys Arg Gly Tyr Ile
          50             55             60

Ile Leu Ser His Leu Ser Lys Leu Lys Met Val Leu Gly Val Leu Leu
          65             70             75             80

Trp Cys Val Ser Trp Ala Asp Leu Phe Tyr Ser Phe His Gly Leu Val
          85             90             95

His Gly Arg Ala Pro Ala Pro Val Phe Phe Val Thr Pro Leu Val Val
          100            105            110

Gly Val Thr Met Leu Leu Ala Thr Leu Leu Ile Gln Tyr Glu Arg Leu
          115            120            125

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Gln Gly Val Gln Ser Ser Gly Val Leu Ile Ile Phe Trp Phe Leu Cys	130	135	140
Val Val Cys Ala Ile Val Pro Phe Arg Ser Lys Ile Leu Leu Ala Lys	145	150	155 160
Ala Glu Gly Glu Ile Ser Asp Pro Phe Arg Phe Thr Thr Phe Tyr Ile	165	170	175
His Phe Ala Leu Val Leu Ser Ala Leu Ile Leu Ala Cys Phe Arg Glu	180	185	190
Lys Pro Pro Phe Phe Ser Ala Lys Asn Val Asp Pro Asn Pro Tyr Pro	195	200	205
Glu Thr Ser Ala Gly Phe Leu Ser Arg Leu Phe Phe Trp Trp Phe Thr	210	215	220
Lys Met Ala Ile Tyr Gly Tyr Arg His Pro Leu Glu Glu Lys Asp Leu	225	230	235 240
Trp Ser Leu Lys Glu Glu Asp Arg Ser Gln Met Val Val Gln Gln Leu	245	250	255
Leu Glu Ala Trp Arg Lys Gln Glu Lys Gln Thr Ala Arg His Lys Ala	260	265	270
Ser Ala Ala Pro Gly Lys Asn Ala Ser Gly Glu Asp Glu Val Leu Leu	275	280	285
Gly Ala Arg Pro Arg Pro Arg Lys Pro Ser Phe Leu Lys Ala Leu Leu	290	295	300
Ala Thr Phe Gly Ser Ser Phe Leu Ile Ser Ala Cys Phe Lys Leu Ile	305	310	315 320
Gln Asp Leu Leu Ser Phe Ile Asn Pro Gln Leu Leu Ser Ile Leu Ile	325	330	335
Arg Phe Ile Ser Asn Pro Met Ala Pro Ser Trp Trp Gly Phe Leu Val	340	345	350
Ala Gly Leu Met Phe Leu Cys Ser Met Met Gln Ser Leu Ile Leu Gln	355	360	365
His Tyr Tyr His Tyr Ile Phe Val Thr Gly Val Lys Phe Arg Thr Gly	370	375	380
Ile Met Gly Val Ile Tyr Arg Lys Ala Leu Val Ile Thr Asn Ser Val	385	390	395 400
Lys Arg Ala Ser Thr Val Gly Glu Ile Val Asn Leu Met Ser Val Asp	405	410	415
Ala Gln Arg Phe Met Asp Leu Ala Pro Phe Leu Asn Leu Leu Trp Ser	420	425	430

Ala	Pro	Leu	Gln	Ile	Ile	Leu	Ala	Ile	Tyr	Phe	Leu	Trp	Gln	Asn	Leu	435	440	445	
Gly	Pro	Ser	Val	Leu	Ala	Gly	Val	Ala	Phe	Met	Val	Leu	Leu	Ile	Pro	450	455	460	
Leu	Asn	Gly	Ala	Val	Ala	Val	Lys	Met	Arg	Ala	Phe	Gln	Val	Lys	Gln	465	470	475	480
Met	Lys	Leu	Lys	Asp	Ser	Arg	Ile	Lys	Leu	Met	Ser	Glu	Ile	Leu	Asn	485	490	495	
Gly	Ile	Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Pro	Ser	Phe	Leu	Lys	500	505	510	
Gln	Val	Glu	Gly	Ile	Arg	Gln	Gly	Glu	Leu	Gln	Leu	Leu	Arg	Thr	Ala	515	520	525	
Ala	Tyr	Leu	His	Thr	Thr	Thr	Thr	Phe	Thr	Trp	Met	Cys	Ser	Pro	Phe	530	535	540	
Leu	Val	Thr	Leu	Ile	Thr	Leu	Trp	Val	Tyr	Val	Tyr	Val	Asp	Pro	Asn	545	550	555	560
Asn	Val	Leu	Asp	Ala	Glu	Lys	Ala	Phe	Val	Ser	Val	Ser	Leu	Phe	Asn	565	570	575	
Ile	Leu	Arg	Leu	Pro	Leu	Asn	Met	Leu	Pro	Gln	Leu	Ile	Ser	Asn	Leu	580	585	590	
Thr	Gln	Ala	Ser	Val	Ser	Leu	Lys	Arg	Ile	Gln	Gln	Phe	Leu	Ser	Gln	595	600	605	
Glu	Glu	Leu	Asp	Pro	Gln	Ser	Val	Glu	Arg	Lys	Thr	Ile	Ser	Pro	Gly	610	615	620	
Tyr	Ala	Ile	Thr	Ile	His	Ser	Gly	Thr	Phe	Thr	Trp	Ala	Gln	Asp	Leu	625	630	635	640
Pro	Pro	Thr	Leu	His	Ser	Leu	Asp	Ile	Gln	Val	Pro	Lys	Gly	Ala	Leu	645	650	655	
Val	Ala	Val	Val	Gly	Pro	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Val	Ser	660	665	670	
Ala	Leu	Leu	Gly	Glu	Met	Glu	Lys	Leu	Glu	Gly	Lys	Val	His	Met	Lys	675	680	685	
Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Cys	Thr	690	695	700	
Leu	Gln	Glu	Asn	Val	Leu	Phe	Gly	Lys	Ala	Leu	Asn	Pro	Lys	Arg	Tyr	705	710	715	720
Gln	Gln	Thr	Leu	Glu	Ala	Cys	Ala	Leu	Leu	Ala	Asp	Leu	Glu	Met	Leu	725	730	735	

Pro Gly Gly Asp Gln Thr Glu Ile Gly Glu Lys Gly Ile Asn Leu Ser
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 Gly Gly Gln Arg Gln Arg Val Ser Leu Ala Arg Ala Val Tyr Ser Asp
 755 760 765
 Ala Asp Ile Phe Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ser His
 770 775 780
 Val Ala Lys His Ile Phe Asp His Val Ile Gly Pro Glu Gly Val Leu
 785 790 795 800
 Ala Gly Lys Thr Arg Val Leu Val Thr His Gly Ile Ser Phe Leu Pro
 805 810 815
 Gln Thr Asp Phe Ile Ile Val Leu Ala Asp Gly Gln Val Ser Glu Met
 820 825 830
 Gly Pro Tyr Pro Ala Leu Leu Gln Arg Asn Gly Ser Phe Ala Asn Phe
 835 840 845
 Leu Cys Asn Tyr Ala Pro Asp Glu Asp Gln Gly His Leu Glu Asp Ser
 850 855 860
 Trp Thr Ala Leu Glu Gly Ala Glu Asp Lys Glu Ala Leu Leu Ile Glu
 865 870 875 880
 Asp Thr Leu Ser Asn His Thr Asp Leu Thr Asp Asn Asp Pro Val Thr
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 Tyr Val Val Gln Lys Gln Phe Met Arg Gln Leu Ser Ala Leu Ser Ser
 900 905 910
 Asp Gly Glu Gly Gln Gly Arg Pro Val Pro Arg Arg His Leu Gly Pro
 915 920 925
 Ser Glu Lys Val Gln Val Thr Glu Ala Lys Ala Asp Gly Ala Leu Thr
 930 935 940
 Gln Glu Glu Lys Ala Ala Ile Gly Thr Val Glu Leu Ser Val Phe Trp
 945 950 955 960
 Asp Tyr Ala Lys Ala Val Gly Leu Cys Thr Thr Leu Ala Ile Cys Leu
 965 970 975
 Leu Tyr Val Gly Gln Ser Ala Ala Ala Ile Gly Ala Asn Val Trp Leu
 980 985 990
 Ser Ala Trp Thr Asn Asp Ala Met Ala Asp Ser Arg Gln Asn Asn Thr
 995 1000 1005
 Ser Leu Arg Leu Gly Val Tyr Ala Ala Leu Gly Ile Leu Gln Gly Phe
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 Leu Val Met Leu Ala Ala Met Ala Met Ala Ala Gly Gly Ile Gln Ala
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Ala Arg Val Leu His Gln Ala Leu Leu His Asn Lys Ile Arg Ser Pro
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 Gln Ser Phe Phe Asp Thr Thr Pro Ser Gly Arg Ile Leu Asn Cys Phe
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 Ser Lys Asp Ile Tyr Val Val Asp Glu Val Leu Ala Pro Val Ile Leu
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 Met Leu Leu Asn Ser Phe Phe Asn Ala Ile Ser Thr Leu Val Val Ile
 1090 1095 1100
 Met Ala Ser Thr Pro Leu Phe Thr Val Val Ile Leu Pro Leu Ala Val
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 Leu Tyr Thr Leu Val Gln Arg Phe Tyr Ala Ala Thr Ser Arg Gln Leu
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 Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Ile Tyr Ser His Phe Ser
 1140 1145 1150
 Glu Thr Val Thr Gly Ala Ser Val Ile Arg Ala Tyr Asn Arg Ser Arg
 1155 1160 1165
 Asp Phe Glu Ile Ile Ser Asp Thr Lys Val Asp Ala Asn Gln Arg Ser
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 Cys Tyr Pro Tyr Ile Ile Ser Asn Arg Trp Leu Ser Ile Gly Val Glu
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 Lys Thr Glu Thr Glu Ala Pro Trp Val Val Glu Gly Ser Arg Pro Pro
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 Glu Gly Trp Pro Pro Arg Gly Glu Val Glu Phe Arg Asn Tyr Ser Val
 1285 1290 1295
 Arg Tyr Arg Pro Gly Leu Asp Leu Val Leu Arg Asp Leu Ser Leu His
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 Val His Gly Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly
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 Lys Ser Ser Met Thr Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Lys
 1330 1335 1340

Gly Glu Ile Arg Ile Asp Gly Leu Asn Val Ala Asp Ile Gly Leu His
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 Ser Gly Thr Leu Arg Met Asn Leu Asp Pro Phe Gly Ser Tyr Ser Glu
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<210> 84
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 <212> PRT
 <213> Homo sapiens

<400> 84
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 Ile Leu Ser His Leu Ser Lys Leu Lys Met Val Leu Gly Val Leu Leu
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Trp Cys Val Ser Trp Ala Asp Leu Phe Tyr Ser Phe His Gly Leu Val
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 Val Val Cys Ala Ile Val Pro Phe Arg Ser Lys Ile Leu Leu Ala Lys
 145 150 155 160
 Ala Glu Gly Glu Ile Ser Asp Pro Phe Arg Phe Thr Thr Phe Tyr Ile
 165 170 175
 His Phe Ala Leu Val Leu Ser Ala Leu Ile Leu Ala Cys Phe Arg Glu
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 Lys Pro Pro Phe Phe Ser Ala Lys Asn Val Asp Pro Asn Pro Tyr Pro
 195 200 205
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 Ala Thr Phe Gly Ser Ser Phe Leu Ile Ser Ala Cys Phe Lys Leu Ile
 305 310 315 320
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 Arg Phe Ile Ser Asn Pro Met Ala Pro Ser Trp Trp Gly Phe Leu Val
 340 345 350
 Ala Gly Leu Met Phe Leu Cys Ser Met Met Gln Ser Leu Ile Leu Gln
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 His Tyr Tyr His Tyr Ile Phe Val Thr Gly Val Lys Phe Arg Thr Gly
 370 375 380

Ile Met Gly Val	Ile Tyr Arg Lys Ala Leu Val	Ile Thr Asn Ser Val
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Lys Arg Ala Ser Thr Val Gly Glu Ile Val Asn Leu Met Ser Val Asp		
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Ala Gln Arg Phe Met Asp Leu Ala Pro Phe Leu Asn Leu Leu Trp Ser		
	420	425 430
Ala Pro Leu Gln Ile Ile Leu Ala Ile Tyr Phe Leu Trp Gln Asn Leu		
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Gly Pro Ser Val Leu Ala Gly Val Ala Phe Met Val Leu Leu Ile Pro		
	450	455 460
Leu Asn Gly Ala Val Ala Val Lys Met Arg Ala Phe Gln Val Lys Gln		
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Met Lys Leu Lys Asp Ser Arg Ile Lys Leu Met Ser Glu Ile Leu Asn		
	485	490 495
Gly Ile Lys Val Leu Lys Leu Tyr Ala Trp Glu Pro Ser Phe Leu Lys		
	500	505 510
Gln Val Glu Gly Ile Arg Gln Gly Glu Leu Gln Leu Leu Arg Thr Ala		
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Ala Tyr Leu His Thr Thr Thr Thr Phe Thr Trp Met Cys Ser Pro Phe		
	530	535 540
Leu Val Thr Leu Ile Thr Leu Trp Val Tyr Val Tyr Val Asp Pro Asn		
	545	550 555 560
Asn Val Leu Asp Ala Glu Lys Ala Phe Val Ser Val Ser Leu Phe Asn		
	565	570 575
Ile Leu Arg Leu Pro Leu Asn Met Leu Pro Gln Leu Ile Ser Asn Leu		
	580	585 590
Thr Gln Ala Ser Val Ser Leu Lys Arg Ile Gln Gln Phe Leu Ser Gln		
	595	600 605
Glu Glu Leu Asp Pro Gln Ser Val Glu Arg Lys Thr Ile Ser Pro Gly		
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Tyr Ala Ile Thr Ile His Ser Gly Thr Phe Thr Trp Ala Gln Asp Leu		
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Pro Pro Thr Leu His Ser Leu Asp Ile Gln Val Pro Lys Gly Ala Leu		
	645	650 655
Val Ala Val Val Gly Pro Val Gly Cys Gly Lys Ser Ser Leu Val Ser		
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Ala Leu Leu Gly Glu Met Glu Lys Leu Glu Gly Lys Val His Met Lys		
	675	680 685

Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Cys	Thr	690	695	700	
Leu	Gln	Glu	Asn	Val	Leu	Phe	Gly	Lys	Ala	Leu	Asn	Pro	Lys	Arg	Tyr	705	710	715	720
Gln	Gln	Thr	Leu	Glu	Ala	Cys	Ala	Leu	Leu	Ala	Asp	Leu	Glu	Met	Leu	725	730	735	
Pro	Gly	Gly	Asp	Gln	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Ile	Asn	Leu	Ser	740	745	750	
Gly	Gly	Gln	Arg	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser	Asp	755	760	765	
Ala	Asp	Ile	Phe	Leu	Leu	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ser	His	770	775	780	
Val	Ala	Lys	His	Ile	Phe	Asp	His	Val	Ile	Gly	Pro	Glu	Gly	Val	Leu	785	790	795	800
Ala	Gly	Lys	Thr	Arg	Val	Leu	Val	Thr	His	Gly	Ile	Ser	Phe	Leu	Pro	805	810	815	
Gln	Thr	Asp	Phe	Ile	Ile	Val	Leu	Ala	Asp	Gly	Gln	Val	Ser	Glu	Met	820	825	830	
Gly	Pro	Tyr	Pro	Ala	Leu	Leu	Gln	Arg	Asn	Gly	Ser	Phe	Ala	Asn	Phe	835	840	845	
Leu	Cys	Asn	Tyr	Ala	Pro	Asp	Glu	Asp	Gln	Gly	His	Leu	Glu	Asp	Ser	850	855	860	
Trp	Thr	Ala	Leu	Glu	Gly	Ala	Glu	Asp	Lys	Glu	Ala	Leu	Leu	Ile	Glu	865	870	875	880
Asp	Thr	Leu	Ser	Asn	His	Thr	Asp	Leu	Thr	Asp	Asn	Asp	Pro	Val	Thr	885	890	895	
Tyr	Val	Val	Gln	Lys	Gln	Phe	Met	Arg	Gln	Leu	Ser	Ala	Leu	Ser	Ser	900	905	910	
Asp	Gly	Glu	Gly	Gln	Gly	Arg	Pro	Val	Pro	Arg	Arg	His	Leu	Gly	Pro	915	920	925	
Ser	Glu	Lys	Val	Gln	Val	Thr	Glu	Ala	Lys	Ala	Asp	Gly	Ala	Leu	Thr	930	935	940	
Gln	Glu	Glu	Lys	Ala	Ala	Ile	Gly	Thr	Val	Glu	Leu	Ser	Val	Phe	Trp	945	950	955	960
Asp	Tyr	Ala	Lys	Ala	Val	Gly	Leu	Cys	Thr	Thr	Leu	Ala	Ile	Cys	Leu	965	970	975	
Leu	Tyr	Val	Gly	Gln	Ser	Ala	Ala	Ala	Ile	Gly	Ala	Asn	Val	Trp	Leu	980	985	990	

Ser Ala Trp Thr Asn Asp Ala Met Ala Asp Ser Arg Gln Asn Asn Thr
 995 1000 1005
 Ser Leu Arg Leu Gly Val Tyr Ala Ala Leu Gly Ile Leu Gln Gly Phe
 1010 1015 1020
 Leu Val Met Leu Ala Ala Met Ala Met Ala Ala Gly Gly Ile Gln Ala
 1025 1030 1035 1040
 Ala Arg Val Leu His Gln Ala Leu Leu His Asn Lys Ile Arg Ser Pro
 1045 1050 1055
 Gln Ser Phe Phe Asp Thr Thr Pro Ser Gly Arg Ile Leu Asn Cys Phe
 1060 1065 1070
 Ser Lys Asp Ile Tyr Val Val Asp Glu Val Leu Ala Pro Val Ile Leu
 1075 1080 1085
 Met Leu Leu Asn Ser Phe Phe Asn Ala Ile Ser Thr Leu Val Val Ile
 1090 1095 1100
 Met Ala Ser Thr Pro Leu Phe Thr Val Val Ile Leu Pro Leu Ala Val
 1105 1110 1115 1120
 Leu Tyr Thr Leu Val Gln Arg Phe Tyr Ala Ala Thr Ser Arg Gln Leu
 1125 1130 1135
 Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Ile Tyr Ser His Phe Ser
 1140 1145 1150
 Glu Thr Val Thr Gly Ala Ser Val Ile Arg Ala Tyr Asn Arg Ser Arg
 1155 1160 1165
 Asp Phe Glu Ile Ile Ser Asp Thr Lys Val Asp Ala Asn Gln Arg Ser
 1170 1175 1180
 Cys Tyr Pro Tyr Ile Ile Ser Asn Arg Trp Leu Ser Ile Gly Val Glu
 1185 1190 1195 1200
 Phe Val Gly Asn Cys Val Val Leu Phe Ala Ala Leu Phe Ala Val Ile
 1205 1210 1215
 Gly Arg Ser Ser Leu Asn Pro Gly Leu Val Gly Leu Ser Val Ser Tyr
 1220 1225 1230
 Ser Leu Gln Val Thr Phe Ala Leu Asn Trp Met Ile Arg Met Met Ser
 1235 1240 1245
 Asp Leu Glu Ser Asn Ile Val Ala Val Glu Arg Val Lys Glu Tyr Ser
 1250 1255 1260
 Lys Thr Glu Thr Glu Ala Pro Trp Val Val Glu Gly Ser Arg Pro Pro
 1265 1270 1275 1280
 Glu Gly Trp Pro Pro Arg Gly Glu Val Glu Phe Arg Asn Tyr Ser Val
 1285 1290 1295

Arg Tyr Arg Pro Gly Leu Asp Leu Val Leu Arg Asp Leu Ser Leu His
1300 1305 1310

Val His Gly Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly
1315 1320 1325

Lys Ser Ser Met Thr Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Lys
1330 1335 1340

Gly Glu Ile Arg Ile Asp Gly Leu Asn Val Ala Asp Ile Gly Leu His
1345 1350 1355 1360

Asp Leu Arg Ser Gln Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe
1365 1370 1375

Ser Gly Thr Leu Arg Met Asn Leu Asp Pro Phe Gly Ser Tyr Ser Glu
1380 1385 1390

Glu Asp Ile Trp Trp Ala Leu Glu Leu Ser His Leu His Thr Phe Val
1395 1400 1405

Ser Ser Gln Pro Ala Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Glu
1410 1415 1420

Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Leu
1425 1430 1435 1440

Leu Arg Lys Ser Arg Ile Leu Val Leu Asp Glu Ala Thr Ala Ala Ile
1445 1450 1455

Asp Leu Glu Thr Asp Asn Leu Ile Gln Ala Thr Ile Arg Thr Gln Phe
1460 1465 1470

Asp Thr Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met
1475 1480 1485

Asp Tyr Thr Arg Val Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe
1490 1495 1500

Asp Ser Pro Ala Asn Leu Ile Ala Ala Arg Gly Ile Phe Tyr Gly Met
1505 1510 1515 1520

Ala Arg Asp Ala Gly Leu Ala
1525

<210> 85

<211> 1522

<212> PRT

<213> Rattus norvegicus

<400> 85

Met Asp Arg Leu Cys Gly Ser Gly Glu Leu Gly Ser Lys Phe Trp Asp
1 5 10 15

Ser Asn Leu Thr Val Tyr Thr Asn Thr Pro Asp Leu Thr Pro Cys Phe

20	25	30
Gln Asn Ser Leu Leu Ala Trp Val Pro Cys Ile Tyr Leu Trp Ala Ala		
35	40	45
Leu Pro Cys Tyr Leu Phe Tyr Leu Arg His His Arg Leu Gly Tyr Ile		
50	55	60
Val Leu Ser Cys Leu Ser Arg Leu Lys Thr Ala Leu Gly Val Leu Leu		
65	70	75
Trp Cys Ile Ser Trp Val Asp Leu Phe Tyr Ser Phe His Gly Leu Val		
85	90	95
His Gly Ser Ser Pro Ala Pro Val Phe Phe Ile Thr Pro Leu Leu Val		
100	105	110
Gly Ile Thr Met Leu Leu Ala Thr Leu Leu Ile Gln Tyr Glu Arg Leu		
115	120	125
Arg Gly Val Arg Ser Ser Gly Val Leu Ile Ile Phe Trp Leu Leu Cys		
130	135	140
Val Ile Cys Ala Ile Ile Pro Phe Arg Ser Lys Ile Leu Leu Ala Leu		
145	150	155
Ala Glu Gly Lys Ile Leu Asp Pro Phe Arg Phe Thr Thr Phe Tyr Ile		
165	170	175
Tyr Phe Ala Leu Val Leu Cys Ala Phe Ile Leu Ser Cys Phe Gln Glu		
180	185	190
Lys Pro Pro Leu Phe Ser Pro Glu Asn Leu Asp Thr Asn Pro Cys Pro		
195	200	205
Glu Ala Ser Ala Gly Phe Phe Ser Arg Leu Ser Phe Trp Trp Phe Thr		
210	215	220
Lys Leu Ala Ile Leu Gly Tyr Arg Arg Pro Leu Glu Asp Ser Asp Leu		
225	230	235
Trp Ser Leu Ser Glu Glu Asp Cys Ser His Lys Val Val Gln Arg Leu		
245	250	255
Leu Glu Ala Trp Gln Lys Gln Gln Thr Gln Ala Ser Gly Pro Gln Thr		
260	265	270
Ala Ala Leu Glu Pro Lys Ile Ala Gly Glu Asp Glu Val Leu Leu Lys		
275	280	285
Ala Arg Pro Lys Thr Lys Lys Pro Ser Phe Leu Arg Ala Leu Val Arg		
290	295	300
Thr Phe Thr Ser Ser Leu Leu Met Gly Ala Cys Phe Lys Leu Ile Gln		
305	310	315
Asp Leu Ser Pro Ser Ser Thr His Ser Cys Ser Ala Ser Ser Ser Gly		

325										330					335				
Leu	Phe	Arg	Pro	His	Gly	Pro	Tyr	Trp	Trp	Gly	Phe	Leu	Leu	Ala	Gly				
			340					345					350						
Leu	Met	Phe	Val	Ser	Ser	Thr	Met	Gln	Thr	Leu	Ile	Leu	His	Gln	His				
		355					360					365							
Tyr	His	Cys	Ile	Phe	Val	Met	Ala	Leu	Arg	Ile	Arg	Thr	Ala	Ile	Ile				
	370					375					380								
Gly	Val	Ile	Tyr	Arg	Lys	Ala	Leu	Thr	Ile	Thr	Asn	Ser	Val	Lys	Arg				
385					390					395					400				
Glu	Tyr	Thr	Val	Gly	Glu	Met	Val	Asn	Leu	Met	Ser	Val	Asp	Ala	Gln				
			405					410						415					
Arg	Phe	Met	Asp	Val	Ser	Pro	Phe	Ile	Asn	Leu	Leu	Trp	Ser	Ala	Pro				
			420					425					430						
Leu	Gln	Val	Ile	Leu	Ala	Ile	Tyr	Phe	Leu	Trp	Gln	Ile	Leu	Gly	Pro				
	435						440					445							
Ser	Ala	Leu	Ala	Gly	Val	Ala	Val	Ile	Val	Leu	Leu	Ile	Pro	Leu	Asn				
	450					455					460								
Gly	Ala	Val	Ser	Met	Lys	Met	Lys	Thr	Tyr	Gln	Val	Gln	Gln	Met	Lys				
465					470					475					480				
Phe	Lys	Asp	Ser	Arg	Ile	Lys	Leu	Met	Ser	Glu	Ile	Leu	Asn	Gly	Ile				
				485					490					495					
Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Pro	Thr	Phe	Leu	Glu	Gln	Val				
		500						505					510						
Glu	Gly	Ile	Arg	Gln	Gly	Glu	Leu	Gln	Leu	Leu	Arg	Lys	Gly	Ala	Tyr				
	515					520						525							
Leu	Gln	Ala	Ile	Ser	Thr	Phe	Ile	Trp	Val	Cys	Thr	Pro	Phe	Met	Val				
	530					535					540								
Thr	Leu	Ile	Thr	Leu	Gly	Val	Tyr	Val	Cys	Val	Asp	Lys	Asn	Asn	Val				
545				550					555					560					
Leu	Asp	Ala	Glu	Lys	Ala	Phe	Val	Ser	Leu	Ser	Leu	Phe	Asn	Ile	Leu				
			565					570					575						
Lys	Ile	Pro	Leu	Asn	Leu	Leu	Pro	Gln	Leu	Ile	Ser	Gly	Met	Thr	Gln				
		580						585					590						
Thr	Ser	Val	Ser	Leu	Lys	Arg	Ile	Gln	Asp	Phe	Leu	Asn	Gln	Asp	Glu				
	595					600						605							
Leu	Asp	Pro	Gln	Cys	Val	Glu	Arg	Lys	Thr	Ile	Ser	Pro	Gly	Arg	Ala				
	610					615					620								
Ile	Thr	Ile	His	Asn	Gly	Thr	Phe	Ser	Trp	Ser	Lys	Asp	Leu	Pro	Pro				

625		630		635		640
Thr Leu His Ser	Ile Asn Ile Gln Ile	Pro Lys Gly Ala Leu Val Ala				
	645	650			655	
Val Val Gly Pro	Val Gly Cys Gly Lys Ser Ser Leu Val Ser Ala Leu					
	660	665			670	
Leu Gly Glu Met	Glu Lys Leu Glu Gly Ala Val Ser Val Lys Gly Ser					
	675	680			685	
Val Ala Tyr Val	Pro Gln Gln Ala Trp Ile Gln Asn Cys Thr Leu Gln					
	690	695			700	
Glu Asn Val Leu	Phe Gly Gln Pro Met Asn Pro Lys Arg Tyr Gln Gln					
	705	710			715	720
Ala Leu Glu Thr	Cys Ala Leu Leu Ala Asp Leu Asp Val Leu Pro Gly					
	725	730			735	
Gly Asp Gln Thr	Glu Ile Gly Glu Lys Gly Ile Asn Leu Ser Gly Gly					
	740	745			750	
Gln Arg Gln Arg	Val Ser Leu Ala Arg Ala Val Tyr Ser Asp Ala Asn					
	755	760			765	
Ile Phe Leu Leu	Asp Asp Pro Leu Ser Ala Val Asp Ser His Val Ala					
	770	775			780	
Lys His Ile Phe	Asp Gln Val Ile Gly Pro Glu Gly Val Leu Ala Gly					
	785	790			795	800
Lys Thr Arg Val	Leu Val Thr His Gly Ile Ser Phe Leu Pro Gln Thr					
	805	810			815	
Asp Phe Ile Ile	Val Leu Ala Asp Gly Gln Ile Thr Glu Met Gly His					
	820	825			830	
Tyr Ser Glu Leu	Leu Gln His Asp Gly Ser Phe Ala Asn Phe Leu Arg					
	835	840			845	
Asn Tyr Ala Pro	Asp Glu Asn Gln Glu Ala Asn Glu Gly Val Leu Gln					
	850	855			860	
His Ala Asn Glu	Glu Val Leu Leu Leu Glu Asp Thr Leu Ser Thr His					
	865	870			875	880
Thr Asp Leu Thr	Asp Thr Glu Pro Ala Ile Tyr Glu Val Arg Lys Gln					
	885	890			895	
Phe Met Arg Glu	Met Ser Ser Leu Ser Ser Glu Gly Glu Gly Gln Asn					
	900	905			910	
Arg Pro Val Leu	Lys Arg Tyr Thr Ser Ser Leu Glu Lys Glu Val Pro					
	915	920			925	
Ala Thr Gln Thr	Lys Glu Thr Gly Ala Leu Ile Lys Glu Glu Ile Ala					

930	935	940
Glu Thr Gly Asn Val Lys Leu Ser Val Tyr Trp Asp Tyr Ala Lys Ser 945 950 955 960		
Val Gly Leu Cys Thr Thr Leu Phe Ile Cys Leu Leu Tyr Ala Gly Gln 965 970 975		
Asn Ala Val Ala Ile Gly Ala Asn Val Trp Leu Ser Ala Trp Thr Asn 980 985 990		
Asp Val Glu Glu His Gly Gln Gln Asn Asn Thr Ser Val Arg Leu Gly 995 1000 1005		
Val Tyr Ala Thr Leu Gly Ile Leu Gln Gly Leu Leu Val Met Leu Ser 1010 1015 1020		
Ala Phe Thr Met Val Val Gly Ala Ile Gln Ala Ala Arg Leu Leu His 1025 1030 1035 1040		
Thr Ala Leu Leu His Asn Gln Ile Arg Ala Pro Gln Ser Phe Phe Asp 1045 1050 1055		
Thr Thr Pro Ser Gly Arg Ile Leu Asn Arg Phe Ser Lys Asp Ile Tyr 1060 1065 1070		
Val Ile His Glu Val Leu Ala Pro Thr Ile Leu Met Leu Phe Asn Ser 1075 1080 1085		
Phe Tyr Thr Ser Ile Ser Thr Ile Val Val Ile Val Ala Ser Thr Pro 1090 1095 1100		
Leu Phe Cys Val Val Val Leu Pro Leu Ala Val Phe Tyr Gly Phe Val 1105 1110 1115 1120		
Gln Arg Phe Tyr Val Ala Thr Ser Arg Gln Leu Lys Arg Leu Glu Ser 1125 1130 1135		
Val Ser Arg Ser Pro Ile Phe Ser His Phe Ser Glu Thr Val Thr Gly 1140 1145 1150		
Thr Ser Val Ile Arg Ala Tyr Gly Arg Val Gln Asp Phe Lys Val Leu 1155 1160 1165		
Ser Asp Ala Lys Val Asp Ser Asn Gln Lys Thr Thr Tyr Pro Tyr Ile 1170 1175 1180		
Ala Ser Asn Arg Trp Leu Gly Val His Val Glu Phe Val Gly Asn Cys 1185 1190 1195 1200		
Val Val Leu Phe Ser Ala Leu Phe Ala Val Ile Gly Arg Asn Ser Leu 1205 1210 1215		
Asn Pro Gly Leu Val Gly Leu Ser Val Ser Tyr Ala Leu Gln Val Thr 1220 1225 1230		
Leu Ser Leu Asn Trp Met Ile Arg Thr Leu Ser Asp Leu Glu Ser Asn		

1235	1240	1245
Ile Ile Ala Val Glu Arg Val Lys Glu Tyr Ser Lys Thr Glu Thr Glu 1250	1255	1260
Ala Pro Trp Val Leu Glu Ser Asn Arg Ala Pro Glu Gly Trp Pro Arg 1265	1270	1275 1280
Ser Gly Val Val Glu Phe Arg Asn Tyr Ser Val Arg Tyr Arg Pro Gly 1285	1290	1295
Leu Glu Leu Val Leu Lys Asn Leu Thr Leu His Val Gln Gly Gly Glu 1300	1305	1310
Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser Met Thr 1315	1320	1325
Leu Cys Leu Phe Arg Ile Leu Glu Ala Ala Glu Gly Glu Ile Phe Ile 1330	1335	1340
Asp Gly Leu Asn Val Ala His Ile Gly Leu His Asp Leu Arg Ser Gln 1345	1350	1355 1360
Leu Thr Ile Ile Pro Gln Asp Pro Ile Leu Phe Ser Gly Thr Leu Arg 1365	1370	1375
Met Asn Leu Asp Pro Phe Gly Arg Tyr Ser Asp Glu Asp Ile Trp Arg 1380	1385	1390
Thr Leu Glu Leu Ser His Leu Ser Ala Phe Val Ser Ser Gln Pro Thr 1395	1400	1405
Gly Leu Asp Phe Gln Cys Ser Glu Gly Gly Asp Asn Leu Ser Val Gly 1410	1415	1420
Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Leu Leu Arg Lys Ser Arg 1425	1430	1435 1440
Val Leu Val Leu Asp Glu Ala Thr Ala Ala Ile Asp Leu Glu Thr Asp 1445	1450	1455
Asp Leu Ile Gln Gly Thr Ile Arg Thr Gln Phe Glu Asp Cys Thr Val 1460	1465	1470
Leu Thr Ile Ala His Arg Leu Asn Thr Ile Met Asp Tyr Asn Arg Val 1475	1480	1485
Leu Val Leu Asp Lys Gly Val Val Ala Glu Phe Asp Ser Pro Val Asn 1490	1495	1500
Leu Ile Ala Ala Gly Gly Ile Phe Tyr Gly Met Ala Lys Asp Ala Gly 1505	1510	1515 1520
Leu Ala		

<210> 86
 <211> 1531
 <212> PRT
 <213> Homo sapiens

<400> 86
 Met Ala Leu Arg Gly Phe Cys Ser Ala Asp Gly Ser Asp Pro Leu Trp
 1 5 10 15
 Asp Trp Asn Val Thr Trp Asn Thr Ser Asn Pro Asp Phe Thr Lys Cys
 20 25 30
 Phe Gln Asn Thr Val Leu Val Trp Val Pro Cys Phe Tyr Leu Trp Ala
 35 40 45
 Cys Phe Pro Phe Tyr Phe Leu Tyr Leu Ser Arg His Asp Arg Gly Tyr
 50 55 60
 Ile Gln Met Thr Pro Leu Asn Lys Thr Lys Thr Ala Leu Gly Phe Leu
 65 70 75 80
 Leu Trp Ile Val Cys Trp Ala Asp Leu Phe Tyr Ser Phe Trp Glu Arg
 85 90 95
 Ser Arg Gly Ile Phe Leu Ala Pro Val Phe Leu Val Ser Pro Thr Leu
 100 105 110
 Leu Gly Ile Thr Thr Leu Leu Ala Thr Phe Leu Ile Gln Leu Glu Arg
 115 120 125
 Arg Lys Gly Val Gln Ser Ser Gly Ile Met Leu Thr Phe Trp Leu Val
 130 135 140
 Ala Leu Val Cys Ala Leu Ala Ile Leu Arg Ser Lys Ile Met Thr Ala
 145 150 155 160
 Leu Lys Glu Asp Ala Gln Val Asp Leu Phe Arg Asp Ile Thr Phe Tyr
 165 170 175
 Val Tyr Phe Ser Leu Leu Leu Ile Gln Leu Val Leu Ser Cys Phe Ser
 180 185 190
 Asp Arg Ser Pro Leu Phe Ser Glu Thr Ile His Asp Pro Asn Pro Cys
 195 200 205
 Pro Glu Ser Ser Ala Ser Phe Leu Ser Arg Ile Thr Phe Trp Trp Ile
 210 215 220
 Thr Gly Leu Ile Val Arg Gly Tyr Arg Gln Pro Leu Glu Gly Ser Asp
 225 230 235 240
 Leu Trp Ser Leu Asn Lys Glu Asp Thr Ser Glu Gln Val Val Pro Val
 245 250 255
 Leu Val Lys Asn Trp Lys Lys Glu Cys Ala Lys Thr Arg Lys Gln Pro
 260 265 270

Val Lys Val Val Tyr Ser Ser Lys Asp Pro Ala Gln Pro Lys Glu Ser
 275 280 285
 Ser Lys Val Asp Ala Asn Glu Glu Val Glu Ala Leu Ile Val Lys Ser
 290 295 300
 Pro Gln Lys Glu Trp Asn Pro Ser Leu Phe Lys Val Leu Tyr Lys Thr
 305 310 315 320
 Phe Gly Pro Tyr Phe Leu Met Ser Phe Phe Phe Lys Ala Ile His Asp
 325 330 335
 Leu Met Met Phe Ser Gly Pro Gln Ile Leu Lys Leu Leu Ile Lys Phe
 340 345 350
 Val Asn Asp Thr Lys Ala Pro Asp Trp Gln Gly Tyr Phe Tyr Thr Val
 355 360 365
 Leu Leu Phe Val Thr Ala Cys Leu Gln Thr Leu Val Leu His Gln Tyr
 370 375 380
 Phe His Ile Cys Phe Val Ser Gly Met Arg Ile Lys Thr Ala Val Ile
 385 390 395 400
 Gly Ala Val Tyr Arg Lys Ala Leu Val Ile Thr Asn Ser Ala Arg Lys
 405 410 415
 Ser Ser Thr Val Gly Glu Ile Val Asn Leu Met Ser Val Asp Ala Gln
 420 425 430
 Arg Phe Met Asp Leu Ala Thr Tyr Ile Asn Met Ile Trp Ser Ala Pro
 435 440 445
 Leu Gln Val Ile Leu Ala Leu Tyr Leu Leu Trp Leu Asn Leu Gly Pro
 450 455 460
 Ser Val Leu Ala Gly Val Ala Val Met Val Leu Met Val Pro Val Asn
 465 470 475 480
 Ala Val Met Ala Met Lys Thr Lys Thr Tyr Gln Val Ala His Met Lys
 485 490 495
 Ser Lys Asp Asn Arg Ile Lys Leu Met Asn Glu Ile Leu Asn Gly Ile
 500 505 510
 Lys Val Leu Lys Leu Tyr Ala Trp Glu Leu Ala Phe Lys Asp Lys Val
 515 520 525
 Leu Ala Ile Arg Gln Glu Glu Leu Lys Val Leu Lys Lys Ser Ala Tyr
 530 535 540
 Leu Ser Ala Val Gly Thr Phe Thr Trp Val Cys Thr Pro Phe Leu Val
 545 550 555 560
 Ala Leu Cys Thr Phe Ala Val Tyr Val Thr Ile Asp Glu Asn Asn Ile
 565 570 575

Leu	Asp	Ala	Gln	Thr	Ala	Phe	Val	Ser	Leu	Ala	Leu	Phe	Asn	Ile	Leu	580	585	590	
Arg	Phe	Pro	Leu	Asn	Ile	Leu	Pro	Met	Val	Ile	Ser	Ser	Ile	Val	Gln	595	600	605	
Ala	Ser	Val	Ser	Leu	Lys	Arg	Leu	Arg	Ile	Phe	Leu	Ser	His	Glu	Glu	610	615	620	
Leu	Glu	Pro	Asp	Ser	Ile	Glu	Arg	Arg	Pro	Val	Lys	Asp	Gly	Gly	Gly	625	630	635	640
Thr	Asn	Ser	Ile	Thr	Val	Arg	Asn	Ala	Thr	Phe	Thr	Trp	Ala	Arg	Ser	645	650	655	
Asp	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala	660	665	670	
Leu	Val	Ala	Val	Val	Gly	Gln	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Leu	675	680	685	
Ser	Ala	Leu	Leu	Ala	Glu	Met	Asp	Lys	Val	Glu	Gly	His	Val	Ala	Ile	690	695	700	
Lys	Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Asp	705	710	715	720
Ser	Leu	Arg	Glu	Asn	Ile	Leu	Phe	Gly	Cys	Gln	Leu	Glu	Glu	Pro	Tyr	725	730	735	
Tyr	Arg	Ser	Val	Ile	Gln	Ala	Cys	Ala	Leu	Leu	Pro	Asp	Leu	Glu	Ile	740	745	750	
Leu	Pro	Ser	Gly	Asp	Arg	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Val	Asn	Leu	755	760	765	
Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser	770	775	780	
Asn	Ala	Asp	Ile	Tyr	Leu	Phe	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ala	785	790	795	800
His	Val	Gly	Lys	His	Ile	Phe	Glu	Asn	Val	Ile	Gly	Pro	Lys	Gly	Met	805	810	815	
Leu	Lys	Asn	Lys	Thr	Arg	Ile	Leu	Val	Thr	His	Ser	Met	Ser	Tyr	Leu	820	825	830	
Pro	Gln	Val	Asp	Val	Ile	Ile	Val	Met	Ser	Gly	Gly	Lys	Ile	Ser	Glu	835	840	845	
Met	Gly	Ser	Tyr	Gln	Glu	Leu	Leu	Ala	Arg	Asp	Gly	Ala	Phe	Ala	Glu	850	855	860	
Phe	Leu	Arg	Thr	Tyr	Ala	Ser	Thr	Glu	Gln	Glu	Gln	Asp	Ala	Glu	Glu	865	870	875	880

Asn Gly Val Thr	Gly Val Ser Gly Pro Gly Lys Glu Ala Lys Gln Met	885	890	895
Glu Asn Gly Met	Leu Val Thr Asp Ser Ala Gly Lys Gln Leu Gln Arg	900	905	910
Gln Leu Ser Ser Ser Ser Ser Tyr Ser Gly Asp Ile Ser Arg His His		915	920	925
Asn Ser Thr Ala Glu Leu Gln Lys Ala Glu Ala Lys Lys Glu Glu Thr		930	935	940
Trp Lys Leu Met Glu Ala Asp Lys Ala Gln Thr Gly Gln Val Lys Leu		945	950	955
Ser Val Tyr Trp Asp Tyr Met Lys Ala Ile Gly Leu Phe Ile Ser Phe		965	970	975
Leu Ser Ile Phe Leu Phe Met Cys Asn His Val Ser Ala Leu Ala Ser		980	985	990
Asn Tyr Trp Leu Ser Leu Trp Thr Asp Asp Pro Ile Val Asn Gly Thr		995	1000	1005
Gln Glu His Thr Lys Val Arg Leu Ser Val Tyr Gly Ala Leu Gly Ile		1010	1015	1020
Ser Gln Gly Ile Ala Val Phe Gly Tyr Ser Met Ala Val Ser Ile Gly		1025	1030	1035
Gly Ile Leu Ala Ser Arg Cys Leu His Val Asp Leu Leu His Ser Ile		1045	1050	1055
Leu Arg Ser Pro Met Ser Phe Phe Glu Arg Thr Pro Ser Gly Asn Leu		1060	1065	1070
Val Asn Arg Phe Ser Lys Glu Leu Asp Thr Val Asp Ser Met Ile Pro		1075	1080	1085
Glu Val Ile Lys Met Phe Met Gly Ser Leu Phe Asn Val Ile Gly Ala		1090	1095	1100
Cys Ile Val Ile Leu Leu Ala Thr Pro Ile Ala Ala Ile Ile Ile Pro		1105	1110	1115
Pro Leu Gly Leu Ile Tyr Phe Phe Val Gln Arg Phe Tyr Val Ala Ser		1125	1130	1135
Ser Arg Gln Leu Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Val Tyr		1140	1145	1150
Ser His Phe Asn Glu Thr Leu Leu Gly Val Ser Val Ile Arg Ala Phe		1155	1160	1165
Glu Glu Gln Glu Arg Phe Ile His Gln Ser Asp Leu Lys Val Asp Glu		1170	1175	1180

Asn Gln Lys Ala Tyr Tyr Pro Ser Ile Val Ala Asn Arg Trp Leu Ala
 1185 1190 1195 1200
 Val Arg Leu Glu Cys Val Gly Asn Cys Ile Val Leu Phe Ala Ala Leu
 1205 1210 1215
 Phe Ala Val Ile Ser Arg His Ser Leu Ser Ala Gly Leu Val Gly Leu
 1220 1225 1230
 Ser Val Ser Tyr Ser Leu Gln Val Thr Thr Tyr Leu Asn Trp Leu Val
 1235 1240 1245
 Arg Met Ser Ser Glu Met Glu Thr Asn Ile Val Ala Val Glu Arg Leu
 1250 1255 1260
 Lys Glu Tyr Ser Glu Thr Glu Lys Glu Ala Pro Trp Gln Ile Gln Glu
 1265 1270 1275 1280
 Thr Ala Pro Pro Ser Ser Trp Pro Gln Val Gly Arg Val Glu Phe Arg
 1285 1290 1295
 Asn Tyr Cys Leu Arg Tyr Arg Glu Asp Leu Asp Phe Val Leu Arg His
 1300 1305 1310
 Ile Asn Val Thr Ile Asn Gly Gly Glu Lys Val Gly Ile Val Gly Arg
 1315 1320 1325
 Thr Gly Ala Gly Lys Ser Ser Leu Thr Leu Gly Leu Phe Arg Ile Asn
 1330 1335 1340
 Glu Ser Ala Glu Gly Glu Ile Ile Ile Asp Gly Ile Asn Ile Ala Lys
 1345 1350 1355 1360
 Ile Gly Leu His Asp Leu Arg Phe Lys Ile Thr Ile Ile Pro Gln Asp
 1365 1370 1375
 Pro Val Leu Phe Ser Gly Ser Leu Arg Met Asn Leu Asp Pro Phe Ser
 1380 1385 1390
 Gln Tyr Ser Asp Glu Glu Val Trp Thr Ser Leu Glu Leu Ala His Leu
 1395 1400 1405
 Lys Asp Phe Val Ser Ala Leu Pro Asp Lys Leu Asp His Glu Cys Ala
 1410 1415 1420
 Glu Gly Gly Glu Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu
 1425 1430 1435 1440
 Ala Arg Ala Leu Leu Arg Lys Thr Lys Ile Leu Val Leu Asp Glu Ala
 1445 1450 1455
 Thr Ala Ala Val Asp Leu Glu Thr Asp Asp Leu Ile Gln Ser Thr Ile
 1460 1465 1470
 Arg Thr Gln Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu
 1475 1480 1485

Asn Thr Ile Met Asp Tyr Thr Arg Val Ile Val Leu Asp Lys Gly Glu
 1490 1495 1500

Ile Gln Glu Tyr Gly Ala Pro Ser Asp Leu Leu Gln Gln Arg Gly Leu
 1505 1510 1515 1520

Phe Tyr Ser Met Ala Lys Asp Ala Gly Leu Val
 1525 1530

<210> 87
 <211> 1515
 <212> PRT
 <213> Homo sapiens

<400> 87
 Asp Trp Asn Val Thr Trp Asn Thr Ser Asn Pro Asp Phe Thr Lys Cys
 1 5 10 15

Phe Gln Asn Thr Val Leu Val Trp Val Pro Cys Phe Tyr Leu Trp Ala
 20 25 30

Cys Phe Pro Phe Tyr Phe Leu Tyr Leu Ser Arg His Asp Arg Gly Tyr
 35 40 45

Ile Gln Met Thr Pro Leu Asn Lys Thr Lys Thr Ala Leu Gly Phe Leu
 50 55 60

Leu Trp Ile Val Cys Trp Ala Asp Leu Phe Tyr Ser Phe Trp Glu Arg
 65 70 75 80

Ser Arg Gly Ile Phe Leu Ala Pro Val Phe Leu Val Ser Pro Thr Leu
 85 90 95

Leu Gly Ile Thr Thr Leu Leu Ala Thr Phe Leu Ile Gln Leu Glu Arg
 100 105 110

Arg Lys Gly Val Gln Ser Ser Gly Ile Met Leu Thr Phe Trp Leu Val
 115 120 125

Ala Leu Val Cys Ala Leu Ala Ile Leu Arg Ser Lys Ile Met Thr Ala
 130 135 140

Leu Lys Glu Asp Ala Gln Val Asp Leu Phe Arg Asp Ile Thr Phe Tyr
 145 150 155 160

Val Tyr Phe Ser Leu Leu Leu Ile Gln Leu Val Leu Ser Cys Phe Ser
 165 170 175

Asp Arg Ser Pro Leu Phe Ser Glu Thr Ile His Asp Pro Asn Pro Cys
 180 185 190

Pro Glu Ser Ser Ala Ser Phe Leu Ser Arg Ile Thr Phe Trp Trp Ile
 195 200 205

Thr Gly Leu Ile Val Arg Gly Tyr Arg Gln Pro Leu Glu Gly Ser Asp
 210 215 220

Leu	Trp	Ser	Leu	Asn	Lys	Glu	Asp	Thr	Ser	Glu	Gln	Val	Val	Pro	Val	225	230	235	240
Leu	Val	Lys	Asn	Trp	Lys	Lys	Glu	Cys	Ala	Lys	Thr	Arg	Lys	Gln	Pro	245	250	255	
Val	Lys	Val	Val	Tyr	Ser	Ser	Lys	Asp	Pro	Ala	Gln	Pro	Lys	Glu	Ser	260	265	270	
Ser	Lys	Val	Asp	Ala	Asn	Glu	Glu	Val	Glu	Ala	Leu	Ile	Val	Lys	Ser	275	280	285	
Pro	Gln	Lys	Glu	Trp	Asn	Pro	Ser	Leu	Phe	Lys	Val	Leu	Tyr	Lys	Thr	290	295	300	
Phe	Gly	Pro	Tyr	Phe	Leu	Met	Ser	Phe	Phe	Phe	Lys	Ala	Ile	His	Asp	305	310	315	320
Leu	Met	Met	Phe	Ser	Gly	Pro	Gln	Ile	Leu	Lys	Leu	Leu	Ile	Lys	Phe	325	330	335	
Val	Asn	Asp	Thr	Lys	Ala	Pro	Asp	Trp	Gln	Gly	Tyr	Phe	Tyr	Thr	Val	340	345	350	
Leu	Leu	Phe	Val	Thr	Ala	Cys	Leu	Gln	Thr	Leu	Val	Leu	His	Gln	Tyr	355	360	365	
Phe	His	Ile	Cys	Phe	Val	Ser	Gly	Met	Arg	Ile	Lys	Thr	Ala	Val	Ile	370	375	380	
Gly	Ala	Val	Tyr	Arg	Lys	Ala	Leu	Val	Ile	Thr	Asn	Ser	Ala	Arg	Lys	385	390	395	400
Ser	Ser	Thr	Val	Gly	Glu	Ile	Val	Asn	Leu	Met	Ser	Val	Asp	Ala	Gln	405	410	415	
Arg	Phe	Met	Asp	Leu	Ala	Thr	Tyr	Ile	Asn	Met	Ile	Trp	Ser	Ala	Pro	420	425	430	
Leu	Gln	Val	Ile	Leu	Ala	Leu	Tyr	Leu	Leu	Trp	Leu	Asn	Leu	Gly	Pro	435	440	445	
Ser	Val	Leu	Ala	Gly	Val	Ala	Val	Met	Val	Leu	Met	Val	Pro	Val	Asn	450	455	460	
Ala	Val	Met	Ala	Met	Lys	Thr	Lys	Thr	Tyr	Gln	Val	Ala	His	Met	Lys	465	470	475	480
Ser	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Met	Asn	Glu	Ile	Leu	Asn	Gly	Ile	485	490	495	
Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Leu	Ala	Phe	Lys	Asp	Lys	Val	500	505	510	
Leu	Ala	Ile	Arg	Gln	Glu	Glu	Leu	Lys	Val	Leu	Lys	Lys	Ser	Ala	Tyr	515	520	525	

Leu	Ser	Ala	Val	Gly	Thr	Phe	Thr	Trp	Val	Cys	Thr	Pro	Phe	Leu	Val	530	535	540	
Ala	Leu	Cys	Thr	Phe	Ala	Val	Tyr	Val	Thr	Ile	Asp	Glu	Asn	Asn	Ile	545	550	555	560
Leu	Asp	Ala	Gln	Thr	Ala	Phe	Val	Ser	Leu	Ala	Leu	Phe	Asn	Ile	Leu	565	570	575	
Arg	Phe	Pro	Leu	Asn	Ile	Leu	Pro	Met	Val	Ile	Ser	Ser	Ile	Val	Gln	580	585	590	
Ala	Ser	Val	Ser	Leu	Lys	Arg	Leu	Arg	Ile	Phe	Leu	Ser	His	Glu	Glu	595	600	605	
Leu	Glu	Pro	Asp	Ser	Ile	Glu	Arg	Arg	Pro	Val	Lys	Asp	Gly	Gly	Gly	610	615	620	
Thr	Asn	Ser	Ile	Thr	Val	Arg	Asn	Ala	Thr	Phe	Thr	Trp	Ala	Arg	Ser	625	630	635	640
Asp	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala	645	650	655	
Leu	Val	Ala	Val	Val	Gly	Gln	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Leu	660	665	670	
Ser	Ala	Leu	Leu	Ala	Glu	Met	Asp	Lys	Val	Glu	Gly	His	Val	Ala	Ile	675	680	685	
Lys	Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Asp	690	695	700	
Ser	Leu	Arg	Glu	Asn	Ile	Leu	Phe	Gly	Cys	Gln	Leu	Glu	Glu	Pro	Tyr	705	710	715	720
Tyr	Arg	Ser	Val	Ile	Gln	Ala	Cys	Ala	Leu	Leu	Pro	Asp	Leu	Glu	Ile	725	730	735	
Leu	Pro	Ser	Gly	Asp	Arg	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Val	Asn	Leu	740	745	750	
Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser	755	760	765	
Asn	Ala	Asp	Ile	Tyr	Leu	Phe	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ala	770	775	780	
His	Val	Gly	Lys	His	Ile	Phe	Glu	Asn	Val	Ile	Gly	Pro	Lys	Gly	Met	785	790	795	800
Leu	Lys	Asn	Lys	Thr	Arg	Ile	Leu	Val	Thr	His	Ser	Met	Ser	Tyr	Leu	805	810	815	
Pro	Gln	Val	Asp	Val	Ile	Ile	Val	Met	Ser	Gly	Gly	Lys	Ile	Ser	Glu	820	825	830	

Met Gly Ser Tyr Gln Glu Leu Leu Ala Arg Asp Gly Ala Phe Ala Glu
 835 840 845
 Phe Leu Arg Thr Tyr Ala Ser Thr Glu Gln Glu Gln Asp Ala Glu Glu
 850 855 860
 Asn Gly Val Thr Gly Val Ser Gly Pro Gly Lys Glu Ala Lys Gln Met
 865 870 875 880
 Glu Asn Gly Met Leu Val Thr Asp Ser Ala Gly Lys Gln Leu Gln Arg
 885 890 895
 Gln Leu Ser Ser Ser Ser Ser Tyr Ser Gly Asp Ile Ser Arg His His
 900 905 910
 Asn Ser Thr Ala Glu Leu Gln Lys Ala Glu Ala Lys Lys Glu Glu Thr
 915 920 925
 Trp Lys Leu Met Glu Ala Asp Lys Ala Gln Thr Gly Gln Val Lys Leu
 930 935 940
 Ser Val Tyr Trp Asp Tyr Met Lys Ala Ile Gly Leu Phe Ile Ser Phe
 945 950 955 960
 Leu Ser Ile Phe Leu Phe Met Cys Asn His Val Ser Ala Leu Ala Ser
 965 970 975
 Asn Tyr Trp Leu Ser Leu Trp Thr Asp Asp Pro Ile Val Asn Gly Thr
 980 985 990
 Gln Glu His Thr Lys Val Arg Leu Ser Val Tyr Gly Ala Leu Gly Ile
 995 1000 1005
 Ser Gln Gly Ile Ala Val Phe Gly Tyr Ser Met Ala Val Ser Ile Gly
 1010 1015 1020
 Gly Ile Leu Ala Ser Arg Cys Leu His Val Asp Leu Leu His Ser Ile
 1025 1030 1035 1040
 Leu Arg Ser Pro Met Ser Phe Phe Glu Arg Thr Pro Ser Gly Asn Leu
 1045 1050 1055
 Val Asn Arg Phe Ser Lys Glu Leu Asp Thr Val Asp Ser Met Ile Pro
 1060 1065 1070
 Glu Val Ile Lys Met Phe Met Gly Ser Leu Phe Asn Val Ile Gly Ala
 1075 1080 1085
 Cys Ile Val Ile Leu Leu Ala Thr Pro Ile Ala Ala Ile Ile Ile Pro
 1090 1095 1100
 Pro Leu Gly Leu Ile Tyr Phe Phe Val Gln Arg Phe Tyr Val Ala Ser
 1105 1110 1115 1120
 Ser Arg Gln Leu Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Val Tyr
 1125 1130 1135

Ser His Phe Asn Glu Thr Leu Leu Gly Val Ser Val Ile Arg Ala Phe
 1140 1145 1150
 Glu Glu Gln Glu Arg Phe Ile His Gln Ser Asp Leu Lys Val Asp Glu
 1155 1160 1165
 Asn Gln Lys Ala Tyr Tyr Pro Ser Ile Val Ala Asn Arg Trp Leu Ala
 1170 1175 1180
 Val Arg Leu Glu Cys Val Gly Asn Cys Ile Val Leu Phe Ala Ala Leu
 1185 1190 1195 1200
 Phe Ala Val Ile Ser Arg His Ser Leu Ser Ala Gly Leu Val Gly Leu
 1205 1210 1215
 Ser Val Ser Tyr Ser Leu Gln Val Thr Thr Tyr Leu Asn Trp Leu Val
 1220 1225 1230
 Arg Met Ser Ser Glu Met Glu Thr Asn Ile Val Ala Val Glu Arg Leu
 1235 1240 1245
 Lys Glu Tyr Ser Glu Thr Glu Lys Glu Ala Pro Trp Gln Ile Gln Glu
 1250 1255 1260
 Thr Ala Pro Pro Ser Ser Trp Pro Gln Val Gly Arg Val Glu Phe Arg
 1265 1270 1275 1280
 Asn Tyr Cys Leu Arg Tyr Arg Glu Asp Leu Asp Phe Val Leu Arg His
 1285 1290 1295
 Ile Asn Val Thr Ile Asn Gly Gly Glu Lys Val Gly Ile Val Gly Arg
 1300 1305 1310
 Thr Gly Ala Gly Lys Ser Ser Leu Thr Leu Gly Leu Phe Arg Ile Asn
 1315 1320 1325
 Glu Ser Ala Glu Gly Glu Ile Ile Ile Asp Gly Ile Asn Ile Ala Lys
 1330 1335 1340
 Ile Gly Leu His Asp Leu Arg Phe Lys Ile Thr Ile Ile Pro Gln Asp
 1345 1350 1355 1360
 Pro Val Leu Phe Ser Gly Ser Leu Arg Met Asn Leu Asp Pro Phe Ser
 1365 1370 1375
 Gln Tyr Ser Asp Glu Glu Val Trp Thr Ser Leu Glu Leu Ala His Leu
 1380 1385 1390
 Lys Asp Phe Val Ser Ala Leu Pro Asp Lys Leu Asp His Glu Cys Ala
 1395 1400 1405
 Glu Gly Gly Glu Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu
 1410 1415 1420
 Ala Arg Ala Leu Leu Arg Lys Thr Lys Ile Leu Val Leu Asp Glu Ala
 1425 1430 1435 1440

Thr Ala Ala Val Asp Leu Glu Thr Asp Asp Leu Ile Gln Ser Thr Ile
1445 1450 1455

Arg Thr Gln Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu
1460 1465 1470

Asn Thr Ile Met Asp Tyr Thr Arg Val Ile Val Leu Asp Lys Gly Glu
1475 1480 1485

Ile Gln Glu Tyr Gly Ala Pro Ser Asp Leu Leu Gln Gln Arg Gly Leu
1490 1495 1500

Phe Tyr Ser Met Ala Lys Asp Ala Gly Leu Val
1505 1510 1515

<210> 88
<211> 1528
<212> PRT
<213> Mus musculus

<400> 88
Met Ala Leu Arg Ser Phe Cys Ser Ala Asp Gly Ser Asp Pro Leu Trp
1 5 10 15

Asp Trp Asn Val Thr Trp His Thr Ser Asn Pro Asp Phe Thr Lys Cys
20 25 30

Phe Gln Asn Thr Val Leu Thr Trp Val Pro Cys Phe Tyr Leu Trp Ser
35 40 45

Cys Phe Pro Leu Tyr Phe Phe Tyr Leu Ser Arg His Asp Arg Gly Tyr
50 55 60

Ile Gln Met Thr His Leu Asn Lys Thr Lys Thr Ala Leu Gly Phe Phe
65 70 75 80

Leu Trp Ile Ile Cys Trp Ala Asp Leu Phe Tyr Ser Phe Trp Glu Arg
85 90 95

Ser Gln Gly Val Leu Arg Ala Pro Val Leu Leu Val Ser Pro Thr Leu
100 105 110

Leu Gly Ile Thr Met Leu Leu Ala Thr Phe Leu Ile Gln Leu Glu Arg
115 120 125

Arg Lys Gly Val Gln Ser Ser Gly Ile Met Leu Thr Phe Trp Leu Val
130 135 140

Ala Leu Leu Cys Ala Leu Ala Ile Leu Arg Ser Lys Ile Ile Ser Ala
145 150 155 160

Leu Lys Lys Asp Ala His Val Asp Val Phe Arg Asp Ser Thr Phe Tyr
165 170 175

Leu Tyr Phe Thr Leu Val Leu Val Gln Leu Val Leu Ser Cys Phe Ser

180					185					190						
Asp	Cys	Ser	Pro	Leu	Phe	Ser	Glu	Thr	Val	His	Asp	Arg	Asn	Pro	Cys	
195					200					205						
Pro	Glu	Ser	Ser	Ala	Ser	Phe	Leu	Ser	Arg	Ile	Thr	Phe	Trp	Trp	Ile	
210					215					220						
Thr	Gly	Met	Met	Val	His	Gly	Tyr	Arg	Gln	Pro	Leu	Glu	Ser	Ser	Asp	
225					230					235					240	
Leu	Trp	Ser	Leu	Asn	Lys	Glu	Asp	Thr	Ser	Glu	Glu	Val	Val	Pro	Val	
245					250					255						
Leu	Val	Asn	Asn	Trp	Lys	Lys	Glu	Cys	Asp	Lys	Ser	Arg	Lys	Gln	Pro	
260					265					270						
Val	Arg	Ile	Val	Tyr	Ala	Pro	Pro	Lys	Asp	Pro	Ser	Lys	Pro	Lys	Gly	
275					280					285						
Ser	Ser	Gln	Leu	Asp	Val	Asn	Glu	Glu	Val	Glu	Ala	Leu	Ile	Val	Lys	
290					295					300						
Ser	Pro	His	Lys	Asp	Arg	Glu	Pro	Ser	Leu	Phe	Lys	Val	Leu	Tyr	Lys	
305					310					315					320	
Thr	Phe	Gly	Pro	Tyr	Phe	Leu	Met	Ser	Phe	Leu	Tyr	Lys	Ala	Leu	His	
325					330					335						
Asp	Leu	Met	Met	Phe	Ala	Gly	Pro	Lys	Ile	Leu	Glu	Leu	Ile	Ile	Asn	
340					345					350						
Phe	Val	Asn	Asp	Arg	Glu	Ala	Pro	Asp	Trp	Gln	Gly	Tyr	Phe	Tyr	Thr	
355					360					365						
Ala	Leu	Leu	Phe	Val	Ser	Ala	Cys	Leu	Gln	Thr	Leu	Ala	Leu	His	Gln	
370					375					380						
Tyr	Phe	His	Ile	Cys	Phe	Val	Ser	Gly	Met	Arg	Ile	Lys	Thr	Ala	Val	
385					390					395					400	
Val	Gly	Ala	Val	Tyr	Arg	Lys	Ala	Leu	Leu	Ile	Thr	Asn	Ala	Ala	Arg	
405					410					415						
Lys	Ser	Ser	Thr	Val	Gly	Glu	Ile	Val	Asn	Leu	Met	Ser	Val	Asp	Ala	
420					425					430						
Gln	Arg	Phe	Met	Asp	Leu	Ala	Thr	Tyr	Ile	Asn	Met	Ile	Trp	Ser	Ala	
435					440					445						
Pro	Leu	Gln	Val	Ile	Leu	Ala	Leu	Tyr	Phe	Leu	Trp	Leu	Ser	Leu	Gly	
450					455					460						
Pro	Ser	Val	Leu	Ala	Gly	Val	Ala	Val	Met	Ile	Leu	Met	Val	Pro	Leu	
465					470					475					480	
Asn	Ala	Val	Met	Ala	Met	Lys	Thr	Lys	Thr	Tyr	Gln	Val	Ala	His	Met	

485							490							495						
Lys	Ser	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Met	Asn	Glu	Ile	Leu	Asn	Gly					
			500				505						510							
Ile	Lys	Val	Leu	Lys	Leu	Tyr	Ala	Trp	Glu	Leu	Ala	Phe	Gln	Asp	Lys					
			515				520						525							
Val	Met	Ser	Ile	Arg	Gln	Glu	Glu	Leu	Lys	Val	Leu	Lys	Lys	Ser	Ala					
			530				535						540							
Tyr	Leu	Ala	Ala	Val	Gly	Thr	Phe	Thr	Trp	Val	Cys	Thr	Pro	Phe	Leu					
545						550						555			560					
Val	Ala	Leu	Ser	Thr	Phe	Ala	Val	Phe	Val	Thr	Val	Asp	Glu	Arg	Asn					
			565						570						575					
Ile	Leu	Asp	Ala	Lys	Lys	Ala	Phe	Val	Ser	Leu	Ala	Leu	Phe	Asn	Ile					
			580						585						590					
Leu	Arg	Phe	Pro	Leu	Asn	Ile	Leu	Pro	Met	Val	Ile	Ser	Ser	Ile	Val					
			595						600						605					
Gln	Ala	Ser	Val	Ser	Leu	Lys	Arg	Leu	Arg	Ile	Phe	Leu	Ser	His	Glu					
610						615						620								
Glu	Leu	Glu	Pro	Asp	Ser	Ile	Glu	Arg	Arg	Ser	Ile	Lys	Ser	Gly	Glu					
625						630						635			640					
Gly	Asn	Ser	Ile	Thr	Val	Lys	Asn	Ala	Thr	Phe	Thr	Trp	Ala	Arg	Gly					
			645						650						655					
Glu	Pro	Pro	Thr	Leu	Asn	Gly	Ile	Thr	Phe	Ser	Ile	Pro	Glu	Gly	Ala					
			660						665						670					
Leu	Val	Ala	Val	Val	Gly	Gln	Val	Gly	Cys	Gly	Lys	Ser	Ser	Leu	Leu					
			675						680						685					
Ser	Ala	Leu	Leu	Ala	Glu	Met	Asp	Lys	Val	Glu	Gly	His	Val	Thr	Leu					
690						695						700								
Lys	Gly	Ser	Val	Ala	Tyr	Val	Pro	Gln	Gln	Ala	Trp	Ile	Gln	Asn	Asp					
705						710						715			720					
Ser	Leu	Arg	Glu	Asn	Ile	Leu	Phe	Gly	His	Pro	Leu	Gln	Glu	Asn	Tyr					
			725						730						735					
Tyr	Lys	Ala	Val	Met	Glu	Ala	Cys	Ala	Leu	Leu	Pro	Asp	Leu	Glu	Ile					
			740						745						750					
Leu	Pro	Ser	Gly	Asp	Arg	Thr	Glu	Ile	Gly	Glu	Lys	Gly	Val	Asn	Leu					
			755						760						765					
Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ser	Leu	Ala	Arg	Ala	Val	Tyr	Ser					
770						775						780								
Asn	Ser	Asp	Ile	Tyr	Leu	Phe	Asp	Asp	Pro	Leu	Ser	Ala	Val	Asp	Ala					

785		790		795		800
His Val Gly Lys	His Ile Phe Glu Lys	Val Val Gly Pro Met Gly Leu				
	805	810			815	
Leu Lys Asn Lys	Thr Arg Ile Leu Val Thr His Gly Ile Ser Tyr Leu					
	820	825			830	
Pro Gln Val Asp Val Ile Ile Val Met Ser Gly Gly Lys Ile Ser Glu						
	835	840			845	
Met Gly Ser Tyr Gln Glu Leu Leu Asp Arg Asp Gly Ala Phe Ala Glu						
	850	855			860	
Phe Leu Arg Thr Tyr Ala Asn Ala Glu Gln Asp Leu Ala Ser Glu Asp						
	865	870			875	880
Asp Ser Val Ser Gly Ser Gly Lys Glu Ser Lys Pro Val Glu Asn Gly						
	885	890				895
Met Leu Val Thr Asp Thr Val Gly Lys His Leu Gln Arg His Leu Ser						
	900	905				910
Asn Ser Ser Ser His Ser Gly Asp Thr Ser Gln Gln His Ser Ser Ile						
	915	920				925
Ala Glu Leu Gln Lys Ala Gly Ala Lys Glu Glu Thr Trp Lys Leu Met						
	930	935			940	
Glu Ala Asp Lys Ala Gln Thr Gly Gln Val Gln Leu Ser Val Tyr Trp						
	945	950			955	960
Asn Tyr Met Lys Ala Ile Gly Leu Phe Ile Thr Phe Leu Ser Ile Phe						
	965	970				975
Leu Phe Leu Cys Asn His Val Ser Ala Leu Ala Ser Asn Tyr Trp Leu						
	980	985				990
Ser Leu Trp Thr Asp Asp Pro Pro Val Val Asn Gly Thr Gln Ala Asn						
	995	1000			1005	
Arg Asn Phe Arg Leu Ser Val Tyr Gly Ala Leu Gly Ile Leu Gln Gly						
	1010	1015			1020	
Ala Ala Ile Phe Gly Tyr Ser Met Ala Val Ser Ile Gly Gly Ile Phe						
	1025	1030			1035	1040
Ala Ser Arg Arg Leu His Leu Asp Leu Leu Tyr Asn Val Leu Arg Ser						
	1045	1050				1055
Pro Met Ser Phe Phe Glu Arg Thr Pro Ser Gly Asn Leu Val Asn Arg						
	1060	1065				1070
Phe Ser Lys Glu Leu Asp Thr Val Asp Ser Met Ile Pro Gln Val Ile						
	1075	1080				1085
Lys Met Phe Met Gly Ser Leu Phe Ser Val Ile Gly Ala Val Ile Ile						

[illegible]

1095

1100

Ile Leu Leu Ala Thr Pro Ile Ala Ala Val Ile Ile Pro Pro Leu Gly
1105 1110 1115 1120

Leu Val Tyr Phe Phe Val Gln Arg Phe Tyr Val Ala Ser Ser Arg Gln
1125 1130 1135

Leu Lys Arg Leu Glu Ser Val Ser Arg Ser Pro Val Tyr Ser His Phe
1140 1145 1150

Asn Glu Thr Leu Leu Gly Val Ser Val Ile Arg Ala Phe Glu Glu Gln
1155 1160 1165

Glu Arg Phe Ile His Gln Ser Asp Leu Lys Val Asp Glu Asn Gln Lys
1170 1175 1180

Ala Tyr Tyr Pro Ser Ile Val Ala Asn Arg Trp Leu Ala Val Arg Leu
1185 1190 1195 1200

Glu Cys Val Gly Asn Cys Ile Val Leu Phe Ala Ala Leu Phe Ala Val
1205 1210 1215

Ile Ser Arg His Ser Leu Ser Ala Gly Leu Val Gly Leu Ser Val Ser
1220 1225 1230

Tyr Ser Leu Gln Ile Thr Ala Tyr Leu Asn Trp Leu Val Arg Met Ser
1235 1240 1245

Ser Glu Met Glu Thr Asn Ile Val Ala Val Glu Arg Leu Lys Glu Tyr
1250 1255 1260

Ser Glu Thr Glu Lys Glu Ala Pro Trp Gln Ile Gln Glu Thr Ala Pro
1265 1270 1275 1280

Pro Ser Thr Trp Pro His Ser Gly Arg Val Glu Phe Arg Asp Tyr Cys
1285 1290 1295

Leu Arg Tyr Arg Glu Asp Leu Asp Leu Val Leu Lys His Ile Asn Val
1300 1305 1310

Thr Ile Glu Gly Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala
1315 1320 1325

Gly Lys Ser Ser Leu Thr Leu Gly Leu Phe Arg Ile Asn Glu Ser Ala
1330 1335 1340

Glu Gly Glu Ile Ile Ile Asp Gly Val Asn Ile Ala Lys Ile Gly Leu
1345 1350 1355 1360

His Asn Leu Arg Phe Lys Ile Thr Ile Ile Pro Gln Asp Pro Val Leu
1365 1370 1375

Phe Ser Gly Ser Leu Arg Met Asn Leu Asp Pro Phe Ser Gln Tyr Ser
1380 1385 1390

Asp Glu Glu Val Trp Met Ala Leu Glu Leu Ala His Leu Lys Gly Phe

1395	1400	1405
Val Ser Ala Leu Pro Asp Lys Leu Asn His Glu Cys Ala Glu Gly Gly		
1410	1415	1420
Glu Asn Leu Ser Val Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala		
1425	1430	1435 1440
Leu Leu Arg Lys Thr Lys Ile Leu Val Leu Asp Glu Ala Thr Ala Ala		
	1445	1450 1455
Val Asp Leu Glu Thr Asp Asn Leu Ile Gln Ser Thr Ile Arg Thr Gln		
	1460	1465 1470
Phe Glu Asp Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile		
	1475	1480 1485
Met Asp Tyr Thr Arg Val Ile Val Leu Asp Lys Gly Glu Val Arg Glu		
	1490	1495 1500
Cys Gly Ala Pro Ser Glu Leu Leu Gln Gln Arg Gly Ile Phe Tyr Ser		
1505	1510	1515 1520
Met Ala Lys Asp Ala Gly Leu Val		
	1525	

<210> 89
 <211> 1794
 <212> DNA
 <213> Homo sapiens

<400> 89
 acgcgtagcc acaagaccgg gtccgtttct ggttgccggt cccgcagggtg acgctgcaga 60
 cagaccagag actccagtc cctcgcctat ctgtggaatc atattctggc tgatcttttg 120
 tttcaaaagt ccggtggcct ggggctgtat ggtcccaccc cctggggggg ttgaggaagt 180
 tgctgtcgtc tgaggtactg ccgtacgtgt agtcctgaaa ccagcttttc tctctccaaa 240
 gaagcaccaa gggagcatct ggaccaccag gctgcacacc aacccttccc cagaccgcga 300
 ttccgacaag agacggggca ccttccattg caaagagatt tccccagatc ctttctcctt 360
 gatctacca aacttccaga tctttccaaa gctgatatca atgggcagaa tccaaatatc 420
 caggtcacca tagagggtgt cgacggctct gactctgaag cagataaaga tcagcatccg 480
 gagaataagc ccagctggtc agtcccattc cccgactggc gggcctgggt gcagagggtc 540
 ctgtccttgg ccagggcaaa cagcggggac caggactaca agtacgacag tacctcagac 600
 gacagcaact tcctcaaccc cccagggggg tgggaccata cagccccagg ccaccggact 660
 tttgaaacca aagatcagcc agaatatgat tccacagatg gcgagggtga ctggagtctc 720
 tgggtctgtc gcagcgtcac ctgcgggaac ggcaaccaga aacggaccgc gtcttgtggc 780
 tacgcgtgca ctgcaacaga atcgaggacc tgtgaccgtc caaactgccc agcttgcacc 840
 ggattcctga ttgtaaagga agcttggtta ggggtggtag tttggcatgt ccctgcacct 900
 ccaactggca acccctctgt gcctttgcct gaggtctttc tctggaccgc agcccagctg 960
 cgcattgaatg cacagggtat tcctagctgg aaatccagga ccagtcacct gtcagtgatg 1020
 aatgggagct ggtggataaa aactcagatc cccatcaata aaaacaaatc cggactcagt 1080
 aaggagagga tttattcaaa ggattattgc agggaggcaa gggatgttat ctccctatta 1140
 ttgcaatggg atgaacgctg tgaccataag atctgcaagc atctcaagga acagcctggg 1200
 gtcacatgct ccttgaagca cctcctgtgg gccggttgta cacgcggtga gagggtttct 1260
 ctttggcctt ttccagacac agacagctgt gagcgtgga tgagcttcaa agcgagggtt 1320
 ttaaagaagt acatgcacaa ggtgatgaat gacctgccc gctgccccctg ctccctaccc 1380
 actgagggtg cctacagcac ggcggacatc ttcgaccgca tcaagcgcaa ggacttccgc 1440

tggaaggacg ccagcggggc caaggagaag ctggagatct acaagcccac tgcccgggtac 1500
 tgcacccgct ccacgctgtc cctggagagc accacgctgg cggcacagca ctgctgctac 1560
 ggcgacaaca tgcagctcat caccaggggc aagggggcgg gcacgcccac cctcatcagc 1620
 accgagttct ccgcggagct ccactacaag gtggacgtcc tgccctggat tatctgcaag 1680
 ggtgactgga gcaggtataa cgaggcccgg cctcccaaca acggacagaa gtgcacagag 1740
 agcccctcgg acgaggacta catcaagcag ttccaagagg ccagggaata ttaa 1794

<210> 90
 <211> 539
 <212> PRT
 <213> Homo sapiens

<400> 90
 Gly Ser Cys Cys Arg Leu Arg Tyr Cys Arg Thr Cys Ser Pro Glu Thr
 1 5 10 15
 Ser Phe Ser Leu Ser Lys Glu Ala Pro Arg Glu His Leu Asp His Gln
 20 25 30
 Ala Ala His Gln Pro Phe Pro Arg Pro Arg Phe Arg Gln Glu Thr Gly
 35 40 45
 His Pro Ser Leu Gln Arg Asp Phe Pro Arg Ser Phe Leu Leu Asp Leu
 50 55 60
 Pro Asn Phe Pro Asp Leu Ser Lys Ala Asp Ile Asn Gly Gln Asn Pro
 65 70 75 80
 Asn Ile Gln Val Thr Ile Glu Val Val Asp Gly Pro Asp Ser Glu Ala
 85 90 95
 Asp Lys Asp Gln His Pro Glu Asn Lys Pro Ser Trp Ser Val Pro Ser
 100 105 110
 Pro Asp Trp Arg Ala Trp Trp Gln Arg Ser Leu Ser Leu Ala Arg Ala
 115 120 125
 Asn Ser Gly Asp Gln Asp Tyr Lys Tyr Asp Ser Thr Ser Asp Asp Ser
 130 135 140
 Asn Phe Leu Asn Pro Pro Arg Gly Trp Asp His Thr Ala Pro Gly His
 145 150 155 160
 Arg Thr Phe Glu Thr Lys Asp Gln Pro Glu Tyr Asp Ser Thr Asp Gly
 165 170 175
 Glu Gly Asp Trp Ser Leu Trp Ser Val Cys Ser Val Thr Cys Gly Asn
 180 185 190
 Gly Asn Gln Lys Arg Thr Arg Ser Cys Gly Tyr Ala Cys Thr Ala Thr
 195 200 205
 Glu Ser Arg Thr Cys Asp Arg Pro Asn Cys Pro Ala Cys Thr Gly Phe
 210 215 220
 Leu Ile Val Lys Glu Ala Trp Leu Gly Val Val Val Trp His Val Pro

225		230		235		240
Ala Pro Pro Thr Gly Asn Pro Ser Val Pro Leu Pro Glu Val Phe Leu						
	245			250		255
Trp Thr Arg Ala Gln Leu Arg Met Asn Ala Gln Gly Ile Pro Ser Trp						
	260			265		270
Lys Ser Arg Thr Ser Pro Leu Ser Val Met Asn Gly Ser Trp Trp Ile						
	275			280		285
Lys Thr Gln Ile Pro Ile Asn Lys Asn Lys Ser Gly Leu Ser Lys Glu						
	290			295		300
Arg Ile Tyr Ser Lys Asp Tyr Cys Arg Glu Ala Arg Asp Val Ile Ser						
	305			310		315
Leu Leu Leu Gln Trp Asp Glu Arg Cys Asp His Lys Ile Cys Lys His						
	325			330		335
Leu Lys Glu Gln Pro Gly Val Thr Cys Ser Leu Lys His Leu Leu Trp						
	340			345		350
Ala Gly Cys Thr Arg Gly Glu Arg Val Ser Leu Trp Pro Phe Pro Asp						
	355			360		365
Thr Asp Ser Cys Glu Arg Trp Met Ser Phe Lys Ala Arg Phe Leu Lys						
	370			375		380
Lys Tyr Met His Lys Val Met Asn Asp Leu Pro Ser Cys Pro Cys Ser						
	385			390		395
Tyr Pro Thr Glu Val Ala Tyr Ser Thr Ala Asp Ile Phe Asp Arg Ile						
	405			410		415
Lys Arg Lys Asp Phe Arg Trp Lys Asp Ala Ser Gly Pro Lys Glu Lys						
	420			425		430
Leu Glu Ile Tyr Lys Pro Thr Ala Arg Tyr Cys Ile Arg Ser Met Leu						
	435			440		445
Ser Leu Glu Ser Thr Thr Leu Ala Ala Gln His Cys Cys Tyr Gly Asp						
	450			455		460
Asn Met Gln Leu Ile Thr Arg Gly Lys Gly Ala Gly Thr Pro Asn Leu						
	465			470		475
Ile Ser Thr Glu Phe Ser Ala Glu Leu His Tyr Lys Val Asp Val Leu						
	485			490		495
Pro Trp Ile Ile Cys Lys Gly Asp Trp Ser Arg Tyr Asn Glu Ala Arg						
	500			505		510
Pro Pro Asn Asn Gly Gln Lys Cys Thr Glu Ser Pro Ser Asp Glu Asp						
	515			520		525
Tyr Ile Lys Gln Phe Gln Glu Ala Arg Glu Tyr						

530

535

<210> 91
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 91
 gtacgtgtag tcttgaaacc agctttttctc tctccaaaga agcaccaagg gagcatctgg 60
 accaccaggc tgcacacca ccttccccca gaccgcgatt ccgacaagag acgggggcacc 120
 cttcattgca aagagatttc ccagatccct ttctccttga tctaccaaac tttccagatc 180
 tttccaaagc tgatatcaat gggcagaatc caaatatcca ggtcaccata gaggtggtcg 240
 acggtcctga ctctgaagca gataaagatc agcatccgga gaataagccc agctgggcag 300
 tcccatcccc cgactggcgg gcctggtggc agaggtccct gtccttggcc agggcaaaca 360
 gcggggacca ggactacaag tacgacagta cctcagacga cagcaacttc ctcaaccccc 420
 ccagggggtg ggaccataca gccccaggcc accggacttt tgaaaccaa gatcagccag 480
 aatatgattc cacagatggc gaggggtgact ggagtctctg gtctgtctgc agcgtcacct 540
 gcgggaacgg caaccagaaa cggacccggc cttgtggcta cgcgtgcact gcaacagaa 600
 cgaggacctg tgaccgtcca aactgcccag gaattgaaga cacttttagg acagctgcca 660
 ccgaagtgag tctgcttgcg ggaagcgagg agtttaatgc caccaaactg tttgaagttg 720
 acacagacag ctgtgagcgc tggatgagct gcaaaagcga gttcttaaag aagtacatgc 780
 acaaggtgat gaatgacctg cccagctgcc cctgctccta cccactgag gtggcctaca 840
 gcacggctga catcttcgac cgcacaaagc gcaaggactt ccgctggaag gacgccagcg 900
 ggcccaagga gaagctggag atctacaagc ccactgcccg gtactgcatc cgctccatgc 960
 tgtccctgga gagcaccacg ctggcggcac agcactgctg ctacggcgac aacatgcagc 1020
 tcatcaccag gggcaagggg gcgggcacgc ccaacctcat cggcaccgag ttctccgcgg 1080
 agctccacta caaggtggac gtcctgccct ggattatctg caagggtgac tggagcaggt 1140
 ataacgaggc cggcctccc aacaacggac aggagtgcac agagagcccc tcggacgagg 1200
 actacatcaa gcagttccaa gaggccaggg aatattaa 1238

<210> 92
 <211> 411
 <212> PRT
 <213> Homo sapiens

<400> 92
 Thr Cys Ser Pro Glu Thr Ser Phe Ser Leu Ser Lys Glu Ala Pro Arg
 1 5 10 15
 Glu His Leu Asp His Gln Ala Ala His Gln Pro Phe Pro Arg Pro Arg
 20 25 30
 Phe Arg Gln Glu Thr Gly His Pro Ser Leu Gln Arg Asp Phe Pro Arg
 35 40 45
 Ser Phe Leu Leu Asp Leu Pro Asn Phe Pro Asp Leu Ser Lys Ala Asp
 50 55 60
 Ile Asn Gly Gln Asn Pro Asn Ile Gln Val Thr Ile Glu Val Val Asp
 65 70 75 80
 Gly Pro Asp Ser Glu Ala Asp Lys Asp Gln His Pro Glu Asn Lys Pro
 85 90 95
 Ser Trp Ser Val Pro Ser Pro Asp Trp Arg Ala Trp Trp Gln Arg Ser

100					105					110					
Leu	Ser	Leu	Ala	Arg	Ala	Asn	Ser	Gly	Asp	Gln	Asp	Tyr	Lys	Tyr	Asp
		115					120					125			
Ser	Thr	Ser	Asp	Asp	Ser	Asn	Phe	Leu	Asn	Pro	Pro	Arg	Gly	Trp	Asp
		130					135					140			
His	Thr	Ala	Pro	Gly	His	Arg	Thr	Phe	Glu	Thr	Lys	Asp	Gln	Pro	Glu
		145					150					155			160
Tyr	Asp	Ser	Thr	Asp	Gly	Glu	Gly	Asp	Trp	Ser	Leu	Trp	Ser	Val	Cys
				165					170					175	
Ser	Val	Thr	Cys	Gly	Asn	Gly	Asn	Gln	Lys	Arg	Thr	Arg	Ser	Cys	Gly
			180					185					190		
Tyr	Ala	Cys	Thr	Ala	Thr	Glu	Ser	Arg	Thr	Cys	Asp	Arg	Pro	Asn	Cys
		195					200					205			
Pro	Gly	Ile	Glu	Asp	Thr	Phe	Arg	Thr	Ala	Ala	Thr	Glu	Val	Ser	Leu
		210					215					220			
Leu	Ala	Gly	Ser	Glu	Glu	Phe	Asn	Ala	Thr	Lys	Leu	Phe	Glu	Val	Asp
		225					230					235			240
Thr	Asp	Ser	Cys	Glu	Arg	Trp	Met	Ser	Cys	Lys	Ser	Glu	Phe	Leu	Lys
				245					250					255	
Lys	Tyr	Met	His	Lys	Val	Met	Asn	Asp	Leu	Pro	Ser	Cys	Pro	Cys	Ser
			260					265					270		
Tyr	Pro	Thr	Glu	Val	Ala	Tyr	Ser	Thr	Ala	Asp	Ile	Phe	Asp	Arg	Ile
		275					280					285			
Lys	Arg	Lys	Asp	Phe	Arg	Trp	Lys	Asp	Ala	Ser	Gly	Pro	Lys	Glu	Lys
		290					295					300			
Leu	Glu	Ile	Tyr	Lys	Pro	Thr	Ala	Arg	Tyr	Cys	Ile	Arg	Ser	Met	Leu
		305					310					315			320
Ser	Leu	Glu	Ser	Thr	Thr	Leu	Ala	Ala	Gln	His	Cys	Cys	Tyr	Gly	Asp
				325					330					335	
Asn	Met	Gln	Leu	Ile	Thr	Arg	Gly	Lys	Gly	Ala	Gly	Thr	Pro	Asn	Leu
			340					345					350		
Ile	Gly	Thr	Glu	Phe	Ser	Ala	Glu	Leu	His	Tyr	Lys	Val	Asp	Val	Leu
		355					360					365			
Pro	Trp	Ile	Ile	Cys	Lys	Gly	Asp	Trp	Ser	Arg	Tyr	Asn	Glu	Ala	Arg
		370					375					380			
Pro	Pro	Asn	Asn	Gly	Gln	Glu	Cys	Thr	Glu	Ser	Pro	Ser	Asp	Glu	Asp
		385					390					395			400
Tyr	Ile	Lys	Gln	Phe	Gln	Glu	Ala	Arg	Glu	Tyr					

405

410

<210> 93
 <211> 391
 <212> PRT
 <213> Homo sapiens

<400> 93

His	Gln	Ala	Ala	His	Gln	Pro	Phe	Pro	Arg	Pro	Arg	Phe	Arg	Gln	Glu
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Thr	Gly	His	Pro	Ser	Leu	Gln	Arg	Asp	Phe	Pro	Arg	Ser	Phe	Leu	Leu
			20					25					30		
Asp	Leu	Pro	Asn	Phe	Pro	Asp	Leu	Ser	Lys	Ala	Asp	Ile	Asn	Gly	Gln
		35					40					45			
Asn	Pro	Asn	Ile	Gln	Val	Thr	Ile	Glu	Val	Val	Asp	Gly	Pro	Asp	Ser
	50					55					60				
Glu	Ala	Asp	Lys	Asp	Gln	His	Pro	Glu	Asn	Lys	Pro	Ser	Trp	Ser	Val
65					70					75					80
Pro	Ser	Pro	Asp	Trp	Arg	Ala	Trp	Trp	Gln	Arg	Ser	Leu	Ser	Leu	Ala
			85						90					95	
Arg	Ala	Asn	Ser	Gly	Asp	Gln	Asp	Tyr	Lys	Tyr	Asp	Ser	Thr	Ser	Asp
		100						105					110		
Asp	Ser	Asn	Phe	Leu	Asn	Pro	Pro	Arg	Gly	Trp	Asp	His	Thr	Ala	Pro
		115					120					125			
Gly	His	Arg	Thr	Phe	Glu	Thr	Lys	Asp	Gln	Pro	Glu	Tyr	Asp	Ser	Thr
	130					135					140				
Asp	Gly	Glu	Gly	Asp	Trp	Ser	Leu	Trp	Ser	Val	Cys	Ser	Val	Thr	Cys
145					150					155					160
Gly	Asn	Gly	Asn	Gln	Lys	Arg	Thr	Arg	Ser	Cys	Gly	Tyr	Ala	Cys	Thr
			165						170					175	
Ala	Thr	Glu	Ser	Arg	Thr	Cys	Asp	Arg	Pro	Asn	Cys	Pro	Gly	Ile	Glu
			180					185					190		
Asp	Thr	Phe	Arg	Thr	Ala	Ala	Thr	Glu	Val	Ser	Leu	Leu	Ala	Gly	Ser
		195					200					205			
Glu	Glu	Phe	Asn	Ala	Thr	Lys	Leu	Phe	Glu	Val	Asp	Thr	Asp	Ser	Cys
	210					215					220				
Glu	Arg	Trp	Met	Ser	Cys	Lys	Ser	Glu	Phe	Leu	Lys	Lys	Tyr	Met	His
225					230					235					240
Lys	Val	Met	Asn	Asp	Leu	Pro	Ser	Cys	Pro	Cys	Ser	Tyr	Pro	Thr	Glu
			245						250					255	

Val Ala Tyr Ser Thr Ala Asp Ile Phe Asp Arg Ile Lys Arg Lys Asp
 260 265 270
 Phe Arg Trp Lys Asp Ala Ser Gly Pro Lys Glu Lys Leu Glu Ile Tyr
 275 280 285
 Lys Pro Thr Ala Arg Tyr Cys Ile Arg Ser Met Leu Ser Leu Glu Ser
 290 295 300
 Thr Thr Leu Ala Ala Gln His Cys Cys Tyr Gly Asp Asn Met Gln Leu
 305 310 315 320
 Ile Thr Arg Gly Lys Gly Ala Gly Thr Pro Asn Leu Ile Ser Thr Glu
 325 330 335
 Phe Ser Ala Glu Leu His Tyr Lys Val Asp Val Leu Pro Trp Ile Ile
 340 345 350
 Cys Lys Gly Asp Trp Ser Arg Tyr Asn Glu Ala Arg Pro Pro Asn Asn
 355 360 365
 Gly Gln Lys Cys Thr Glu Ser Pro Ser Asp Glu Asp Tyr Ile Lys Gln
 370 375 380
 Phe Gln Glu Ala Arg Glu Tyr
 385 390

<210> 94
 <211> 658
 <212> PRT
 <213> Homo sapiens

<400> 94
 Met Arg Ala Leu Arg Asp Arg Ala Gly Leu Leu Leu Cys Val Leu Leu
 1 5 10 15
 Leu Ala Ala Leu Leu Glu Ala Ala Leu Gly Leu Pro Val Lys Lys Pro
 20 25 30
 Arg Leu Arg Gly Pro Arg Pro Gly Ser Leu Thr Arg Leu Ala Glu Val
 35 40 45
 Ser Gly Gly Gly Thr Gly Leu Arg Ser Ala Leu Ser Val Pro Pro Pro
 50 55 60
 Gln Pro Ala Gly Ser Ser Arg Ala Gly Ser Gly Thr Gly Thr His Thr
 65 70 75 80
 Gly Ser Asp Pro Pro Met Glu Arg Gly Ala Gly Ala Gly Arg Lys Leu
 85 90 95
 Pro Asp Thr Gly Arg Cys Pro Val Thr Glu Gly Ser Thr Val Gln Leu
 100 105 110
 Ile Ala Pro Trp Asn Ala Ala Asp Val His Ser His Gly Asp Lys Asp
 115 120 125

Ser	Gln	Thr	Cys	Ile	Arg	Val	Ser	Ala	Ser	Pro	Asp	Pro	Arg	Pro	Leu	130	135	140	
Lys	Glu	Glu	Glu	Glu	Ala	Pro	Leu	Leu	Pro	Arg	Thr	His	Leu	Gln	Ala	145	150	155	160
Glu	Pro	His	Gln	His	Gly	Cys	Trp	Thr	Val	Thr	Glu	Pro	Ala	Ala	Met	165	170	175	
Thr	Pro	Gly	Asn	Ala	Thr	Pro	Pro	Arg	Thr	Pro	Glu	Val	Thr	Pro	Leu	180	185	190	
Arg	Leu	Glu	Leu	Gln	Lys	Leu	Pro	Gly	Leu	Ala	Asn	Thr	Thr	Leu	Ser	195	200	205	
Thr	Pro	Asn	Pro	Asp	Thr	Gln	Ala	Ser	Ala	Ser	Pro	Asp	Pro	Arg	Pro	210	215	220	
Leu	Arg	Glu	Glu	Glu	Glu	Ala	Arg	Leu	Leu	Pro	Arg	Thr	His	Leu	Gln	225	230	235	240
Ala	Glu	Leu	His	Gln	His	Gly	Cys	Trp	Thr	Val	Thr	Glu	Pro	Ala	Ala	245	250	255	
Leu	Thr	Pro	Gly	Asn	Ala	Thr	Pro	Pro	Arg	Thr	Gln	Glu	Val	Thr	Pro	260	265	270	
Leu	Leu	Leu	Glu	Leu	Gln	Lys	Leu	Pro	Glu	Leu	Val	His	Ala	Thr	Leu	275	280	285	
Ser	Thr	Pro	Asn	Pro	Asp	Asn	Gln	Val	Thr	Ile	Lys	Val	Val	Glu	Asp	290	295	300	
Pro	Gln	Ala	Glu	Val	Ser	Ile	Asp	Leu	Leu	Ala	Glu	Pro	Ser	Asn	Pro	305	310	315	320
Pro	Pro	Gln	Asp	Thr	Leu	Ser	Trp	Leu	Pro	Ala	Leu	Trp	Ser	Phe	Leu	325	330	335	
Trp	Gly	Asp	Tyr	Lys	Gly	Glu	Glu	Lys	Asp	Arg	Ala	Pro	Gly	Glu	Lys	340	345	350	
Gly	Glu	Glu	Lys	Glu	Glu	Asp	Glu	Asp	Tyr	Pro	Ser	Glu	Asp	Ile	Glu	355	360	365	
Gly	Glu	Asp	Gln	Glu	Asp	Lys	Glu	Glu	Asp	Glu	Glu	Glu	Gln	Ala	Leu	370	375	380	
Trp	Phe	Asn	Gly	Thr	Thr	Asp	Asn	Trp	Asp	Gln	Gly	Trp	Leu	Ala	Pro	385	390	395	400
Gly	Asp	Trp	Val	Phe	Lys	Asp	Ser	Val	Ser	Tyr	Asp	Tyr	Glu	Pro	Gln	405	410	415	
Lys	Glu	Trp	Ser	Pro	Trp	Ser	Pro	Cys	Ser	Gly	Asn	Cys	Ser	Thr	Gly	420	425	430	

Lys Gln Gln Arg Thr Arg Pro Cys Gly Tyr Gly Cys Thr Ala Thr Glu
435 440 445

Thr Arg Thr Cys Asp Leu Pro Ser Cys Pro Gly Thr Glu Asp Lys Asp
450 455 460

Thr Leu Gly Leu Pro Ser Glu Glu Trp Lys Leu Leu Ala Arg Asn Ala
465 470 475 480

Thr Asp Met His Asp Gln Asp Val Asp Ser Cys Glu Lys Trp Leu Asn
485 490 495

Cys Lys Ser Asp Phe Leu Ile Lys Tyr Leu Ser Gln Met Leu Arg Asp
500 505 510

Leu Pro Ser Cys Pro Cys Ala Tyr Pro Leu Glu Ala Met Asp Ser Pro
515 520 525

Val Ser Leu Gln Asp Glu His Gln Gly Arg Ser Phe Arg Trp Arg Asp
530 535 540

Ala Ser Gly Pro Arg Glu Arg Leu Asp Ile Tyr Gln Pro Thr Ala Arg
545 550 555 560

Phe Cys Leu Arg Ser Met Leu Ser Gly Glu Ser Ser Thr Leu Ala Ala
565 570 575

Gln His Cys Cys Tyr Asp Glu Asp Ser Arg Leu Leu Thr Arg Gly Lys
580 585 590

Gly Ala Gly Met Pro Asn Leu Ile Ser Thr Asp Phe Ser Pro Lys Leu
595 600 605

His Phe Lys Phe Asp Thr Thr Pro Trp Ile Leu Cys Lys Gly Asp Trp
610 615 620

Ser Arg Leu His Ala Val Leu Pro Pro Asn Asn Gly Arg Ala Cys Thr
625 630 635 640

Asp Asn Pro Leu Glu Glu Glu Tyr Leu Ala Gln Leu Gln Glu Ala Lys
645 650 655

Glu Tyr

<210> 95

<211> 60

<212> PRT

<213> Homo sapiens

<400> 95

Asn Asn Leu Asn Val Gly Ser Asp Thr Thr Ser Glu Thr Ser Phe Ser
1 5 10 15

Leu Ser Lys Glu Ala Pro Arg Glu His Leu Asp His Gln Ala Ala His

Asp	Pro	Phe	Cys	Val	Ala	Trp	Ser	Tyr	Asn	Ala	Thr	Leu	Ser	Glu	Gly	225	230	235	240
Pro	Asp	Ser	Val	Gly	Phe	Ser	Arg	Glu	Tyr	Arg	Pro	Cys	Tyr	Thr	His	245	250	255	
Arg	Phe	Ala	Ser	Gly	Cys	Gln	Ala	Leu	Ala	Pro	Gly	Trp	Val	Ser	Gly	260	265	270	
Asn	Lys	Tyr	Thr	Arg	Asp	Val	Asp	Cys	Glu	Thr	Gly	Thr	Cys	Ile	His	275	280	285	
Asn	Glu	Trp	Ser	Ser	Trp	Thr	Thr	Cys	Lys	Asp	Pro	Cys	Ser	Asn	Thr	290	295	300	
Glu	Thr	Met	Ser	Arg	Asn	Arg	Thr	Val	Lys	Ser	Val	Ser	Gln	Asn	Trp	305	310	315	320
Ala	Ser	Thr	Thr	Cys	Arg	Asp	Glu	Ser	Gln	Ile	Gln	Leu	Cys	Ser	Glu	325	330	335	
Asn	Pro	Gln	Ser	Ile	Glu	Thr	Cys	Lys	Thr	Cys	Leu	Val	Gly	Ser	Trp	340	345	350	
Ser	Glu	Trp	Ser	Asp	Cys	Ser	Thr	Ser	Cys	Gly	Glu	Gly	Asn	Arg	Ile	355	360	365	
Arg	Thr	Arg	Glu	Ser	Thr	Lys	Pro	Pro	Leu	Asn	Gly	Asp	Glu	Ser	Thr	370	375	380	
Cys	Pro	Glu	Leu	Ile	Ala	Lys	Glu	Ser	Cys	Asn	Lys	Asp	Val	Glu	Cys	385	390	395	400
Pro	Asn	Ile	Gln	Cys	Glu	Leu	Gly	Glu	Trp	Ser	Ser	Trp	Ser	Pro	Cys	405	410	415	
Ser	Val	Thr	Cys	Gly	Ser	Gly	Thr	Thr	Ser	Arg	Asn	Arg	Glu	Val	Lys	420	425	430	
Gly	Glu	Asn	Cys	Thr	Glu	Leu	Pro	Thr	Glu	Ser	Lys	Lys	Cys	Asn	Leu	435	440	445	
Ala	Asn	Cys	Gly	Asp	Asn	Ser	Ala	Ser	Cys	Thr	Ala	Val	Met	Ser	Val	450	455	460	
Trp	Ser	Glu	Trp	Ser	Ala	Cys	Ser	Glu	Lys	Cys	Asp	Gln	Gly	Leu	Val	465	470	475	480
Arg	Arg	Tyr	Arg	Asp	Phe	Asp	Phe	Ser	Lys	Ile	Gly	Val	Phe	Gly	Tyr	485	490	495	
Val	Pro	Pro	Gly	Lys	Ser	Glu	Glu	Gln	Asn	Lys	Val	Arg	Glu	Ile	Cys	500	505	510	
Lys	Asp	Thr	Pro	Thr	Leu	Glu	Glu	Glu	Pro	Cys	Thr	Ser	Gly	Val	Thr	515	520	525	

Cys Thr Pro Gly Cys Lys Tyr Thr Glu Trp Ser Ala Trp Ser Ser Cys
 530 535 540
 Asp Cys Ser Gly Ser Gln Thr Arg Asp Arg Val Val Thr Phe Pro Glu
 545 550 555 560
 Gly Ile Ile Asp Ala Ile Cys Gln Ser Ser Lys Asp Thr Arg Ser Cys
 565 570 575
 Ser Lys Pro Glu Gly Cys Thr Glu Thr Thr Pro Asp Ser Gly Asp Ala
 580 585 590
 Thr Leu Ala Ile Ala Ile Gly Leu Pro Val Gly Ile Leu Gly Leu Cys
 595 600 605
 Ile Ile Ala Gly Ser Leu Phe Leu Ile Gly Gly Arg Ser Gly Asn Gln
 610 615 620
 Glu Glu Asp Glu Thr Ser Tyr Gln Tyr Phe Asp Gln Pro Ser Ala Ala
 625 630 635 640
 Leu Asp Gln Asp Ser Glu Tyr Val Gln Glu Ile Gly Pro Glu Ser Gln
 645 650 655
 Asn Trp Ala Ser
 660

<210> 97
 <211> 831
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Gly Leu Ala Trp Gly Leu Gly Val Leu Phe Leu Met His Val Cys
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 Gly Thr Asn Arg Ile Pro Glu Ser Gly Gly Asp Asn Ser Val Phe Asp
 20 25 30
 Ile Phe Glu Leu Thr Gly Ala Ala Arg Lys Gly Ser Gly Arg Arg Leu
 35 40 45
 Val Lys Gly Pro Asp Pro Ser Ser Pro Ala Phe Arg Ile Glu Asp Ala
 50 55 60
 Asn Leu Ile Pro Pro Val Pro Asp Asp Lys Phe Gln Asp Leu Val Asp
 65 70 75 80
 Ala Val Arg Thr Glu Lys Gly Phe Leu Leu Leu Ala Ser Leu Arg Gln
 85 90 95
 Met Lys Lys Thr Arg Gly Thr Leu Leu Ala Leu Glu Arg Lys Asp His
 100 105 110
 Ser Gly Gln Val Phe Ser Val Val Ser Asn Gly Lys Ala Gly Thr Leu
 115 120 125

Asp	Leu	Ser	Leu	Thr	Val	Gln	Gly	Lys	Gln	His	Val	Val	Ser	Val	Glu	130	135	140	
Glu	Ala	Leu	Leu	Ala	Thr	Gly	Gln	Trp	Lys	Ser	Ile	Thr	Leu	Phe	Val	145	150	155	160
Gln	Glu	Asp	Arg	Ala	Gln	Leu	Tyr	Ile	Asp	Cys	Glu	Lys	Met	Glu	Asn	165	170	175	
Ala	Glu	Leu	Asp	Val	Pro	Ile	Gln	Ser	Val	Phe	Thr	Arg	Asp	Leu	Ala	180	185	190	
Ser	Ile	Ala	Arg	Leu	Arg	Ile	Ala	Lys	Gly	Gly	Val	Asn	Asp	Asn	Phe	195	200	205	
Gln	Gly	Val	Leu	Gln	Asn	Val	Arg	Phe	Val	Phe	Gly	Thr	Thr	Pro	Glu	210	215	220	
Asp	Ile	Leu	Arg	Asn	Lys	Gly	Cys	Ser	Ser	Ser	Thr	Ser	Val	Leu	Leu	225	230	235	240
Thr	Leu	Asp	Asn	Asn	Val	Val	Asn	Gly	Ser	Ser	Pro	Ala	Ile	Arg	Thr	245	250	255	
Asn	Tyr	Ile	Gly	His	Lys	Thr	Lys	Asp	Leu	Gln	Ala	Ile	Cys	Gly	Ile	260	265	270	
Ser	Cys	Asp	Glu	Leu	Ser	Ser	Met	Val	Leu	Glu	Leu	Arg	Gly	Leu	Arg	275	280	285	
Thr	Ile	Val	Thr	Thr	Leu	Gln	Asp	Ser	Ile	Arg	Lys	Val	Thr	Glu	Glu	290	295	300	
Asn	Lys	Glu	Leu	Ala	Asn	Glu	Leu	Arg	Arg	Pro	Pro	Leu	Cys	Tyr	His	305	310	315	320
Asn	Gly	Val	Gln	Tyr	Arg	Asn	Asn	Glu	Glu	Trp	Thr	Val	Asp	Ser	Cys	325	330	335	
Thr	Glu	Cys	His	Cys	Gln	Asn	Ser	Val	Thr	Ile	Cys	Lys	Lys	Val	Ser	340	345	350	
Cys	Pro	Ile	Met	Pro	Cys	Ser	Asn	Ala	Thr	Val	Pro	Asp	Gly	Glu	Cys	355	360	365	
Cys	Pro	Arg	Cys	Trp	Pro	Ser	Asp	Ser	Ala	Asp	Asp	Gly	Trp	Ser	Pro	370	375	380	
Trp	Ser	Glu	Trp	Thr	Ser	Cys	Ser	Thr	Ser	Cys	Gly	Asn	Gly	Ile	Gln	385	390	395	400
Gln	Arg	Gly	Arg	Ser	Cys	Asp	Ser	Leu	Asn	Asn	Arg	Cys	Glu	Gly	Ser	405	410	415	
Ser	Val	Gln	Thr	Arg	Thr	Cys	His	Ile	Gln	Glu	Cys	Asp	Lys	Arg	Phe	420	425	430	

Lys Gln Asp Gly Gly Trp Ser His Trp Ser Pro Trp Ser Ser Cys Ser
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 Val Thr Cys Gly Asp Gly Val Ile Thr Arg Ile Arg Leu Cys Asn Ser
 450 455 460
 Pro Ser Pro Gln Met Asn Gly Lys Pro Cys Glu Gly Glu Ala Arg Glu
 465 470 475 480
 Thr Lys Ala Cys Lys Lys Asp Ala Cys Pro Ile Asn Gly Gly Trp Gly
 485 490 495
 Pro Trp Ser Pro Trp Asp Ile Cys Ser Val Thr Cys Gly Gly Gly Val
 500 505 510
 Gln Lys Arg Ser Arg Leu Cys Asn Asn Pro Thr Pro Gln Phe Gly Gly
 515 520 525
 Lys Asp Cys Val Gly Asp Val Thr Glu Asn Gln Ile Cys Asn Lys Gln
 530 535 540
 Asp Cys Pro Ile Asp Gly Cys Leu Ser Asn Pro Cys Phe Ala Gly Val
 545 550 555 560
 Lys Cys Thr Ser Tyr Pro Asp Gly Ser Trp Lys Cys Gly Ala Cys Pro
 565 570 575
 Pro Gly Tyr Ser Gly Asn Gly Ile Gln Cys Thr Asp Val Asp Glu Cys
 580 585 590
 Lys Glu Val Pro Asp Ala Cys Phe Asn His Asn Gly Glu His Arg Cys
 595 600 605
 Glu Asn Thr Asp Pro Gly Tyr Asn Cys Leu Pro Cys Pro Pro Arg Phe
 610 615 620
 Thr Gly Ser Gln Pro Phe Gly Gln Gly Val Glu His Ala Thr Ala Asn
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 Lys Gln Val Cys Lys Pro Arg Asn Pro Cys Thr Asp Gly Thr His Asp
 645 650 655
 Cys Asn Lys Asn Ala Lys Cys Asn Tyr Leu Gly His Tyr Ser Asp Pro
 660 665 670
 Met Tyr Arg Cys Glu Cys Lys Pro Gly Tyr Ala Gly Asn Gly Ile Ile
 675 680 685
 Cys Gly Glu Asp Thr Asp Leu Asp Gly Trp Pro Asn Glu Asn Leu Val
 690 695 700
 Cys Val Ala Asn Ala Thr Tyr His Cys Lys Lys Asp Asn Cys Pro Asn
 705 710 715 720
 Leu Pro Asn Ser Gly Gln Glu Asp Tyr Asp Lys Asp Gly Ile Gly Asp
 725 730 735

Ala Cys Asp Asp Asp Asp Asp Asn Asp Lys Ile Pro Asp Asp Arg Asp
740 745 750

Asn Cys Pro Phe His Tyr Asn Pro Ala Gln Tyr Asp Tyr Asp Arg Asp
755 760 765

Asp Val Gly Asp Arg Cys Asp Asn Cys Pro Tyr Asn His Asn Pro Asp
770 775 780

Gln Ala Asp Thr Asp Asn Asn Gly Glu Gly Asp Ala Cys Ala Ala Asp
785 790 795 800

Ile Asp Gly Asp Gly Ile Leu Asn Glu Arg Asp Asn Cys Gln Tyr Val
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Tyr Asn Val Asp Gln Arg Asp Thr Asp Met Asp Gly Val Gly Asp
820 825 830

<210> 98
<211> 831
<212> PRT
<213> Mus musculus

<400> 98
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Ile Phe Glu Leu Ile Gly Gly Ala Arg Arg Gly Pro Gly Arg Arg Leu
35 40 45

Val Lys Gly Gln Asp Leu Ser Ser Pro Ala Phe Arg Ile Glu Asn Ala
50 55 60

Asn Leu Ile Pro Ala Val Pro Asp Asp Lys Phe Gln Asp Leu Leu Asp
65 70 75 80

Ala Val Trp Ala Asp Lys Gly Phe Ile Phe Leu Ala Ser Leu Arg Gln
85 90 95

Met Lys Lys Thr Arg Gly Thr Leu Leu Ala Val Glu Arg Lys Asp Asn
100 105 110

Thr Gly Gln Ile Phe Ser Val Val Ser Asn Gly Lys Ala Gly Thr Leu
115 120 125

Asp Leu Ser Leu Ser Leu Pro Gly Lys Gln Gln Val Val Ser Val Glu
130 135 140

Glu Ala Leu Leu Ala Thr Gly Gln Trp Lys Ser Ile Thr Leu Phe Val
145 150 155 160

Gln Glu Asp Arg Ala Gln Leu Tyr Ile Asp Cys Asp Lys Met Glu Ser

465		470		475		480
Thr Lys Ala Cys	Lys Lys Asp Ala Cys	Pro Ile Asn Gly Gly Trp Gly				
	485	490			495	
Pro Trp Ser	Pro Trp Asp Ile Cys Ser	Val Thr Cys Gly Gly Gly Val				
	500	505			510	
Gln Arg Arg Ser Arg Leu Cys	Asn Asn Pro Thr Pro Gln Phe Gly Gly					
	515	520			525	
Lys Asp Cys Val Gly Asp Val Thr Glu Asn Gln Val Cys Asn Lys Gln						
	530	535			540	
Asp Cys Pro Ile Asp Gly Cys Leu Ser Asn Pro Cys Phe Ala Gly Ala						
	545	550		555		560
Lys Cys Thr Ser Tyr Pro Asp Gly Ser Trp Lys Cys Gly Ala Cys Pro						
	565	570				575
Pro Gly Tyr Ser Gly Asn Gly Ile Gln Cys Lys Asp Val Asp Glu Cys						
	580	585				590
Lys Glu Val Pro Asp Ala Cys Phe Asn His Asn Gly Glu His Arg Cys						
	595	600			605	
Lys Asn Thr Asp Pro Gly Tyr Asn Cys Leu Pro Cys Pro Pro Arg Phe						
	610	615			620	
Thr Gly Ser Gln Pro Phe Gly Arg Gly Val Glu His Ala Met Ala Asn						
	625	630		635		640
Lys Gln Val Cys Lys Pro Arg Asn Pro Cys Thr Asp Gly Thr His Asp						
	645	650				655
Cys Asn Lys Asn Ala Lys Cys Asn Tyr Leu Gly His Tyr Ser Asp Pro						
	660	665				670
Met Tyr Arg Cys Glu Cys Lys Pro Gly Tyr Ala Gly Asn Gly Ile Ile						
	675	680			685	
Cys Gly Glu Asp Thr Asp Leu Asp Gly Trp Pro Asn Glu Asn Leu Val						
	690	695			700	
Cys Val Ala Asn Ala Thr Tyr His Cys Lys Lys Asp Asn Cys Pro Asn						
	705	710			715	720
Leu Pro Asn Ser Gly Gln Glu Asp Tyr Asp Lys Asp Gly Ile Gly Asp						
	725	730				735
Ala Cys Asp Asp Asp Asp Asp Asn Asp Lys Ile Pro Asp Asp Arg Asp						
	740	745				750
Asn Cys Pro Phe His Tyr Asn Pro Ala Gln Tyr Asp Tyr Asp Arg Asp						
	755	760			765	
Asp Val Gly Asp Arg Cys Asp Asn Cys Pro Tyr Asn His Asn Pro Asp						

770

775

780

Gln Ala Asp Thr Asp Lys Asn Gly Glu Gly Asp Ala Cys Ala Val Asp
785 790 795 800

Ile Asp Gly Asp Gly Ile Leu Asn Glu Arg Asp Asn Cys Gln Tyr Val
805 810 815

Tyr Asn Val Asp Gln Arg Asp Thr Asp Met Asp Gly Val Gly Asp
820 825 830

<210> 99

<211> 2760

<212> DNA

<213> Homo sapiens

<400> 99

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<210> 100

<211> 206

<212> PRT

<213> Homo sapiens

<400> 100

Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His His Cys
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Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln Lys Val
 20 25 30

Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Glu
 35 40 45

Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys Gln Leu
 50 55 60

Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asn Ser
 65 70 75 80

Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln Arg Tyr
 85 90 95

Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val His Ile
 100 105 110

Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Glu Lys Asp
 115 120 125

Ile His Ala Tyr Thr Ser Leu Arg Gly Ser Gln Pro Ala Ser Glu Gly
 130 135 140

Gly Asn Ala Arg Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
 145 150 155 160

Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
 165 170 175

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ile Cys Arg Leu Pro
 180 185 190

Ser Ser Ser Met Asn Leu Gly Thr Ser Asn Ser Thr Trp Gly
 195 200 205

<210> 101

<211> 673

<212> DNA
 <213> Homo sapiens

<400> 101
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 gtgctgcagc cagaagggtgc cgctgcggcg catgtgcttt gtggaccccg tgcggcagtg 180
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<210> 102
 <211> 202
 <212> PRT
 <213> Homo sapiens

<400> 102
 Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His His Cys
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 Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln Lys Val
 20 25 30
 Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Glu
 35 40 45
 Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys Gln Leu
 50 55 60
 Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asn Ser
 65 70 75 80
 Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln Arg Tyr
 85 90 95
 Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val His Ile
 100 105 110
 Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Glu Lys Asp
 115 120 125
 Ile His Ala Tyr Thr Ser Leu Arg Gly Ser Gln Pro Ala Ser Glu Gly
 130 135 140
 Gly Asn Ala Gln Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
 145 150 155 160
 Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
 165 170 175

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ala Met His Lys Ala
180 185 190

Ala Lys Leu Leu Tyr Glu Ser Arg Asp Gln
195 200

<210> 103

<211> 234

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
1 5 10 15

Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
20 25 30

Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
35 40 45

Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
50 55 60

His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65 70 75 80

Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
85 90 95

Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys
100 105 110

Gln Leu Lys Val Leu Leu Ser Gly Ala Thr Phe Leu Val Thr Phe Gly
115 120 125

Asn Ser Glu Lys Pro Glu Thr Met Thr Cys Arg Leu Ser Asn Asn Gln
130 135 140

Arg Tyr Leu Phe Leu Asp Gly Asp Ser His Tyr Glu Ile Glu Ile Val
145 150 155 160

His Ile Ser Thr Val Gln Ile Leu Thr Glu Gly Phe Pro Pro Gly Gly
165 170 175

Gly Asn Ala Arg Ala Thr Gly Met Phe Leu Gln Tyr Thr Val Pro Gly
180 185 190

Thr Glu Gly Val Thr Gln Leu Lys Leu Thr Val Val Glu Asp Val Thr
195 200 205

Val Gly Arg Arg Gln Ala Val Ala Trp Leu Val Ala Met His Lys Ala
210 215 220

Ala Lys Leu Leu Tyr Glu Ser Arg Asp Gln
225 230

<210> 104
 <211> 211
 <212> PRT
 <213> Mus musculus

<400> 104
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 Pro Gln Trp Val Pro Asp Lys Glu Cys Pro Arg Cys Met Gln Cys Asp
 20 25 30
 Ala Lys Phe Asp Phe Ile Thr Arg Lys His His Cys Arg Arg Cys Gly
 35 40 45
 Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln Lys Val Pro Leu Arg Arg
 50 55 60
 Met Cys Phe Val Asp Pro Val Arg Gln Cys Ala Asp Cys Ala Leu Val
 65 70 75 80
 Ser His Arg Glu Ala Glu Phe Tyr Asp Lys Gln Leu Lys Val Leu Leu
 85 90 95
 Ser Gly Ala Thr Phe Leu Val Thr Phe Gly Asp Ser Glu Lys Pro Glu
 100 105 110
 Thr Met Val Cys Arg Leu Ser Asn Asn Gln Arg Cys Leu Val Leu Asp
 115 120 125
 Gly Asp Ser His Arg Glu Ile Glu Ile Ala His Val Cys Thr Val Gln
 130 135 140
 Ile Leu Thr Glu Gly Phe Thr Pro Gly Ala Gly Ser Thr Leu Ala Thr
 145 150 155 160
 Gly Met Leu Leu Gln Tyr Thr Val Pro Gly Ala Glu Ala Ala Ala Gln
 165 170 175
 Leu Arg Leu Met Ala Gly Glu Asp Ala Ser Gly Ser Lys Arg Gln Ala
 180 185 190
 Ala Ala Trp Leu Ala Ala Met His Lys Ala Thr Lys Leu Leu Tyr Glu
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 Ser Arg Asp Gln
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<210> 105
 <211> 327
 <212> PRT
 <213> Homo sapiens

<400> 105

Pro Ala Glu Arg Trp Val Ser Val Ser Ser Glu Glu Pro Arg Ala Pro
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 Val Pro Ala Ser Val Arg Ala Pro Glu Arg Pro Leu Pro Gly Leu Arg
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 Ser Ala Arg Arg Ala Ala Cys Arg Ala Tyr Ser Gly Pro Arg Thr Cys
 35 40 45
 Pro Ala His Leu Pro Ala Ala Arg Ser Ala Leu Arg Ala Ser Leu Ala
 50 55 60
 Ser Leu Pro Ala Thr Ala Arg Gly Leu Arg Pro Cys Leu Arg Val Arg
 65 70 75 80
 Pro Ala Pro Gln Pro Gly Pro Gly Ala Ala Leu Arg Arg Ala Arg Ala
 85 90 95
 Ala Arg Ser Pro Ala Arg Ala Gly Ala Ala Met Met Asn Arg Phe Arg
 100 105 110
 Lys Trp Leu Tyr Lys Pro Lys Arg Ser Asp Pro Gln Leu Leu Ala Arg
 115 120 125
 Phe Tyr Tyr Ala Asp Glu Glu Leu Asn Gln Val Ala Ala Glu Leu Asp
 130 135 140
 Ser Leu Asp Gly Arg Lys Asp Pro Gln Arg Cys Thr Leu Leu Val Ser
 145 150 155 160
 Gln Phe Arg Ser Cys Gln Asp Asn Val Leu Asn Ile Ile Asn Gln Ile
 165 170 175
 Met Asp Glu Cys Ile Pro Gln Asp Arg Ala Pro Arg Asp Phe Cys Val
 180 185 190
 Lys Phe Pro Glu Glu Ile Arg His Asp Asn Leu Ala Gly Gln Leu Trp
 195 200 205
 Phe Gly Ala Glu Cys Leu Ala Ala Gly Ser Ile Ile Met Asn Arg Glu
 210 215 220
 Leu Glu Ser Met Ala Met Arg Pro Leu Ala Lys Glu Leu Thr Arg Ser
 225 230 235 240
 Leu Glu Asp Val Arg Gly Ala Leu Arg Asp Gln Ala Leu Arg Asp Leu
 245 250 255
 Asn Thr Tyr Thr Glu Lys Met Arg Glu Ala Leu Arg His Phe Asp Val
 260 265 270
 Leu Phe Ala Glu Phe Glu Leu Ser Tyr Val Ser Ala Met Val Pro Val
 275 280 285
 Lys Ser Pro Arg Glu Tyr Tyr Val Gln Gln Glu Val Ile Val Leu Phe
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Cys Glu Thr Val Glu Arg Ala Leu Asp Phe Gly Tyr Leu Thr Gln Asp
 305 310 315 320

Met Ile Asp Asp Tyr Glu Pro
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<210> 106
 <211> 173
 <212> PRT
 <213> Homo sapiens

<400> 106
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Ser Ser Pro Asp Gln Pro Ser Arg Ser His Leu Asp Asp Asp Gly Met
 20 25 30

Pro Val Tyr Thr Asp Thr Ile Gln Gln Arg Leu Arg Gln Ile Glu Ser
 35 40 45

Gly His Gln Gln Glu Val Glu Thr Leu Lys Lys Gln Val Gln Glu Leu
 50 55 60

Lys Ser Arg Leu Glu Ser Gln Tyr Leu Thr Ser Ser Leu Arg Phe Asn
 65 70 75 80

Gly Asp Phe Gly Asp Glu Val Met Thr Arg Trp Leu Pro Asp His Leu
 85 90 95

Ala Ala His Cys Tyr Ala Cys Asp Ser Ala Phe Trp Leu Ala Ser Arg
 100 105 110

Lys His His Cys Arg Asn Cys Gly Asn Val Phe Cys Ser Ser Cys Cys
 115 120 125

Asn Gln Lys Val Pro Val Pro Ser Gln Gln Leu Phe Glu Pro Ser Arg
 130 135 140

Val Cys Lys Ser Cys Tyr Ser Ser Leu His Pro Thr Ser Ser Ser Ile
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Asp Leu Glu Leu Asp Lys Pro Ile Ala Ala Thr Ser Asn
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<210> 107
 <211> 597
 <212> PRT
 <213> Mus musculus

<400> 107
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 1 5 10 15

Leu Pro Arg Ser Pro Ala Ser Pro Ser His Leu Thr His Phe Lys Pro

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35					40					45						
Phe	Val	Asn	Leu	Phe	Arg	Phe	Asn	Lys	Glu	Arg	Gly	Glu	Gly	Gly	Gln	
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Gly	Glu	Gln	Gln	Ser	Pro	Ser	Ser	Ser	Trp	Ala	Ser	Pro	Gln	Ile	Pro	
65					70					75					80	
Ser	Arg	Thr	Gln	Ser	Val	Arg	Ser	Pro	Val	Pro	Tyr	Lys	Lys	Gln	Leu	
85					90					95						
Asn	Glu	Glu	Leu	His	Arg	Arg	Ser	Ser	Val	Leu	Glu	Asn	Thr	Leu	Pro	
100					105					110						
His	Pro	Gln	Glu	Ser	Thr	Asp	Ser	Arg	Arg	Lys	Ala	Glu	Pro	Ala	Cys	
115					120					125						
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130					135					140						
Val	Leu	Lys	Arg	Leu	Lys	Glu	Ile	Met	Glu	Gly	Lys	Ser	Gln	Asp	Ser	
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Asp	Leu	Lys	Gln	Tyr	Trp	Met	Pro	Asp	Ser	Gln	Cys	Lys	Glu	Cys	Tyr	
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180					185					190						
Leu	Cys	Gly	Gln	Ile	Phe	Cys	Ser	Arg	Cys	Cys	Asn	Gln	Glu	Ile	Pro	
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Gly	Lys	Phe	Met	Gly	Tyr	Thr	Gly	Asp	Leu	Arg	Ala	Cys	Thr	Tyr	Cys	
210					215					220						
Arg	Lys	Ile	Ala	Leu	Ser	Tyr	Ala	His	Ser	Thr	Asp	Ser	Asn	Ser	Ile	
225					230					235					240	
Gly	Glu	Asp	Leu	Asn	Ala	Leu	Ser	Asp	Ser	Thr	Cys	Ser	Val	Ser	Ile	
245					250					255						
Leu	Asp	Pro	Ser	Glu	Pro	Arg	Thr	Pro	Val	Gly	Ser	Arg	Lys	Ala	Ser	
260					265					270						
Arg	Asn	Ile	Phe	Leu	Glu	Asp	Asp	Leu	Ala	Trp	Gln	Ser	Leu	Ile	His	
275					280					285						
Pro	Asp	Ser	Ser	Asn	Ser	Ala	Leu	Ser	Thr	Arg	Leu	Val	Ser	Val	Gln	
290					295					300						
Glu	Asp	Ala	Gly	Lys	Ser	Pro	Ala	Arg	Asn	Arg	Ser	Ala	Ser	Ile	Thr	
305					310					315					320	
Asn	Leu	Ser	Leu	Asp	Arg	Ser	Gly	Ser	Pro	Met	Val	Pro	Ser	Tyr	Glu	

325										330					335				
Thr	Ser	Val	Ser	Pro	Gln	Ala	Asn	Arg	Asn	Tyr	Ile	Arg	Thr	Glu	Thr				
			340						345					350					
Thr	Glu	Asp	Glu	Arg	Lys	Ile	Leu	Leu	Asp	Ser	Ala	Gln	Leu	Lys	Asp				
		355					360					365							
Leu	Trp	Lys	Lys	Ile	Cys	His	His	Thr	Ser	Gly	Met	Glu	Phe	Gln	Asp				
	370					375					380								
His	Arg	Tyr	Trp	Leu	Arg	Thr	His	Pro	Asn	Cys	Ile	Val	Gly	Lys	Glu				
385					390					395					400				
Leu	Val	Asn	Trp	Leu	Ile	Arg	Asn	Gly	His	Ile	Ala	Thr	Arg	Ala	Gln				
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Ala	Ile	Ala	Ile	Gly	Gln	Ala	Met	Val	Asp	Gly	Arg	Trp	Leu	Asp	Cys				
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Val	Ser	His	His	Asp	Gln	Leu	Phe	Arg	Asp	Glu	Tyr	Ala	Leu	Tyr	Arg				
		435					440					445							
Pro	Leu	Gln	Ser	Thr	Glu	Phe	Ser	Glu	Thr	Pro	Ser	Pro	Asp	Ser	Asp				
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Ser	Val	Asn	Ser	Val	Glu	Gly	His	Ser	Glu	Pro	Ser	Trp	Phe	Lys	Asp				
465					470					475				480					
Ile	Lys	Phe	Asp	Asp	Ser	Asp	Thr	Glu	Gln	Ile	Ala	Glu	Glu	Gly	Asp				
			485					490						495					
Asp	Asn	Leu	Ala	Lys	Tyr	Leu	Val	Ser	Asp	Thr	Gly	Gly	Gln	Gln	Leu				
		500						505					510						
Ser	Ile	Ser	Asp	Ala	Phe	Ile	Lys	Glu	Ser	Leu	Phe	Asn	Arg	Arg	Val				
		515					520					525							
Glu	Glu	Lys	Ser	Lys	Glu	Leu	Pro	Phe	Thr	Pro	Leu	Gly	Trp	His	His				
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Asn	Asn	Leu	Glu	Leu	Leu	Arg	Glu	Glu	Asn	Glu	Glu	Lys	Gln	Ala	Met				
545					550					555				560					
Glu	Arg	Leu	Leu	Ser	Ala	Asn	His	Asn	His	Met	Met	Ala	Leu	Leu	Gln				
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Gln	Leu	Leu	Gln	Asn	Glu	Ser	Leu	Ser	Ser	Ser	Trp	Arg	Asp	Ile	Ile				
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<211> 24

<212> DNA

<213> Artificial Sequence

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<211> 27

<212> DNA

<213> Artificial Sequence

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27

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26

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oligonucleotide primer

<400> 134
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